

INDEX TO VOL. XXII.

THE NEW ORLEANS JOURNAL OF MEDICINE

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EDITED BY

Dr. S. M. BEMISS & Dr. W. S. MITCHELL,

S. S. HERRICK, M. D., and SAM'L LOGAN, M. D., *Co-Editors.*

"*Tota philosophia frugifera et fructuosa, nec ulla pars ejus inculta ac deserta sit.*"—CICERO.

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ORIGINAL COMMUNICATIONS.

ART. I.—*On the Antagonism of Yellow Fever to "Catarrh," Pneumonia, and Consumption:* By WIL HUTSON FORD, M. D., Professor of Medical Chemistry, etc., New Orleans School of Medicine.

MESSRS. EDITORS,—I place the following pages in your hands for publication, because I think that in view of the rapid theoretical advances now being made in the etiology of phthisis, and of the miasmatic affections, the time seems to have come when the subject considered may prove interesting to more of your readers than heretofore.

It is now nearly twelve years, since I entered into a very laborious examination of the public meteorological and necrological records of the city of Charleston, S. C., where I resided, with a view to determine the influence of heat, humidity, and calmness of the nights (as recorded since 1832 by the civil authorities) upon the generation of yellow fever and cholera, and at certain seasons, upon the catarrhal group of diseases. The results I obtained proved to my mind with an authority amounting to demonstration, that the causes of putrefaction are the prime causes of yellow fever and cholera; and conversely, that the absence of these causes, was nearly always associated with the prevalence of catarrhal diseases, and that these were directly antagonistic to the yellow fever and to cholera.

The investigations of which the following paper comprised a section, were conducted throughout according to a system of my own, the only method, I still believe, which can be employed in researches where the etiological power of a single causative element is to be estimated, upon a result due to a combination of several causes acting in the same direction, or to the preponderance of the causative agencies over the inhibitory. This method consists in constructing tables where the expressions of the effect of a given agent, are arranged incrementally, and of affixing to each term, its proper mortuary or nosological record. If the numbers so arranged are really the increments of a prime or indispensable agent in the causation of the nosological affix, the highest number will *certainly* show itself qualified by the presence of this affix, and the lowest term likewise by its invariable *absence*. Of this mode of examination I will give an example: I pre-suppose, that if yellow fever is caused by a conjunction of heat, humidity, and miasm, in the absence of wind and ozone during the autumnal months, that atmospheric *heat* is such an *indispensable agent* in its causation, that is to say, yellow fever *cannot exist* epidemically without high heat, and below a certain point of the thermometer, cannot *exist at all*. The influence of heat is exerted upon the disease in many ways; it enhances the *production of miasm*, inasmuch as it favors the decomposition of organic matter; and it is productive of an aerial humidity which prevents or impedes the cutaneous and pulmonary transpirations, and tends to generate the *sepsis* which is the main feature of yellow fever; it also acts in other ways, which I have not time at present to consider.

I calculate the mean temperature of the ninety-two days comprised within the three autumnal months, August, September, and October, which I have designated "*the yellow fever season*." This seasonal mean is obtained from three daily observations during the entire season—the figure, expressing it is, therefore, for each year, the mean of 276 observations. Each figure represents the mean heat of the yellow fever season for the year indicated, and these heat expressions are arranged incrementally. As my examinations were interrupted by the war, they reach only down to 1857.

TABLE XXX, Showing the Increscence of Temperature, calculated for all the recorded years, (at the time this table was constructed.) from the 7 A. M., 2 P. M., and 9 P. M. Observations, and for the Months of August, September and October conjointly :

Years.	Temp.	Hygiene.	Years.	Temp.	Hygiene.
1837	79.04	Yellow Fever.	1841	75.06	.....
1836	78.39	Cholera.	1852	74.91	.....
1834	78.01	Yellow Fever.	1843	74.78	.....
1840	77.82	Yellow Fever.	1850	74.44	.....
1838	77.63	Yellow Fever.	1848	74.20	.....
1833	77.24	.....	1844	74.09	.....
1839	77.22	.....	1851	77.04	.....
1835	76.39	.....	1856	74.00	.....
1846	76.38	.....	1853	73.96	.....
1854	75.82	.....	1842	73.29	.....
1847	75.60	.....	1857	73.18	.....
1855	75.44	.....	1849	73.08	.....
1832	75.22	.....	1845	72.94	Healthy.

The maximum indicates pestilential seasons, and the minimum a healthy season.

To show that the above result is in no way fortuitous, I divide the years into three nosological groups—1st. *Epidemic years*, qualified by more than twenty deaths. *Sporadic years*, by less than twenty deaths, and *Healthy years*, in which we have had no deaths whatever by yellow fever or cholera.

It will be seen by the following table that these means are themselves incremental.

TABLE XXXI, Showing the Progression of the Means for Table XXX:

EPIDEMIC YEARS.		SPORADIC.		HEALTHY.	
Years.	Temp.	Years.	Temp.	Years.	Temp.
1856	74.00	1857	73.18	1855	75.44
1854	75.82	1843	74.78	1853	73.96
1852	74.91	1841	75.06	1851	74.04
1839	77.22	1837	79.04	1850	74.44
1838	77.63	.....	.....	1848	74.20
1849	73.08	.....	.....	1847	75.60
1840	77.82	.....	.....	1846	76.38
1835	76.39	.....	.....	1845	72.94
1834	78.01	.....	.....	1844	74.09
.....	.....	.....	.....	1842	73.29
.....	.....	.....	.....	1833	77.24
.....	.....	.....	.....	1832	75.22
Mean.	76.12	Mean.	75.51	Mean.	74.78

The progression is regular, and corroborative of the preceding table; introduction of the cholera season into the healthy series, renders the mean 75.02—less than that for the other groups—we therefore conclude that, *calculated for all the recorded years from the three daily observations, and for the months of August, September and October, conjointly, the temperature is a primary agent in the production of the yellow fever.*

I have varied this kind of demonstration in every possible way, perhaps, and always with similar results; so likewise, for the influence of wind, barometric height, calmness of the nights, fair and cloudy days and humidity. A synopsis of the method, I have since the war, transmitted to Prof. Henry, who informs me that he has placed it on file in the secret archives of the Smithsonian Institution until such time as opportunity may enable me to complete and publish the entire series. When I undertook these labors, I imagined that valuable comparative results could probably be obtained in Savannah, Mobile, and especially in New Orleans; but much to my chagrin, I find that Charleston is the only city in the yellow fever zone on this continent, as far as I am aware, where, under the public patronage, a regular mortuary and meteorological record is kept. In Charleston, this has been closely attended to since the year 1832—and I do not hesitate to affirm, that the records of the Registrar's Office in that city are able to afford the most valuable data, relating to the origin of yellow fever, and of its allied and antagonistic diseases, resting moreover upon the incontrovertible authority of figures which are always open to the scrutiny of any who may be disposed to question their legitimacy, or significance. I subjoin the abstract referred to and commented upon above.

Notwithstanding the purely negative results obtained from the ozonometrical observations of a single year, at Konigsberg, as detailed by Schiefferdecker, we may, I think, for many reasons, safely agree with Schonbein, Seontetten and their followers, in regarding ozone as the *prime cause* of catarrh, and of acute pulmonary affections.

Ozone is unmasked, and consequently more effective, though produced *absolutely in less quantity*, during the colder months, when catarrhal affections of all sorts especially prevail. By the term

catarrhal affections, we wish to designate the *inflammatory fluxes*, commonly known as *coryza*, *sore throat*, *tonsillitis*, *laryngitis*, and *bronchitis*, and when associated with fever, *influenza*; likewise *pneumonia* supervening upon bronchial catarrh, and the *bronchopneumonia* of children. If now, miasm be the causative agent of the miasmatic fevers, catarrhal affections and the miasmatic fevers, should be *mutually opposed*. When one class of disease prevails, the other should be absent; when catarrh is epidemic yellow fever should not appear, and conversely. In those months, therefore, when according to our records, yellow fever especially prevails,—when, in other words, miasm is peculiarly active, catarrhal disease should be at its *minimum*. With a view to this question let us examine the variation of any of the catarrhal diseases for the several months,—and we shall for this purpose, select *pneumonia*; it is not by any means the disease which we would most prefer, but it is requisite to choose a malady which sometimes terminates fatally, since our records are essentially *obituary*. We cannot suppose that *all* pneumonias are caused by ozone; we heartily and necessarily concur with La Roche in utterly repudiating the singular theory which traces this disease in any direct way to the influence of miasm. So-called hypostatic pneumonias supervene upon the exanthemata, and upon typhoid fever, are often due to metastasis; but these varieties are not generally recorded; the term *pneumonia* in our city records, almost invariably implies what the French call "*pneumonie franche*." In our mortuary records, fatal terminations are included, of *cases originating* without the city limits; and the figures are blended with those dependent upon disease actually existing in the city. For these reasons it is not strange that deaths by pneumonia are recorded in variable numbers, for all the months of the year, and sometimes even during the progress of epidemics. During the ninety-two days of the *yellow fever season*, it cannot be supposed that miasm is uniformly predominant, that ozone never preponderates even momentarily in the air; a temporary redundancy of this agent being quite sufficient to induce cases of catarrh, although it may again totally disappear. So that *spells of ozonic weather*, shortly giving way to miasm, are yet competent to produce *in-exposed or non-miasmatic localities*,

those isolated and fatal cases of catarrh which are recorded for our epidemic seasons.

It is possible to infer, only, that pneumonia should be *least frequent* in the miasmatic months of August, September and October. We present a table showing the sum of deaths by pneumonia for each month, estimated for thirteen years, 1830, 1831, 1846 to 1856 inclusively:

Month	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
No. of deaths	32	39	33	46	20	25	20	13	13	17	28	29

August, September and October, present the minima; the months which are most miasmatic, are least pneumonic; a fact which has long been currently known and which is in complete harmony with the principles advocated by Schonbein, and here maintained. Ozone moreover is known to be most abundant in the air, most unmasked, in April, and it will be observed that the maximum of deaths by pneumonia also occurs in that month.

Let us now examine comparatively, the number of deaths by pneumonia in the yellow fever season for *different years*. Since the annual number of deaths by this disease varies much, we shall estimate the percentage of deaths during the yellow fever season, to the whole number of deaths, of whites blacks and colored conjointly—we present:

TABLE LXVII, *Showing the Increasescece of the Ratios of the Aggregate Number of Deaths in August, September and October, for all Classes of the Population, to the Entire Number of Deaths by Pneumonia, in each Year, for all Classes and for all Recorded Years:*

Years.	Ratios.	Hygienic.	Years.	Ratios.	Hygienic.
1846	.312	Healthy.	1851	.136	.....
1848	.171	Healthy.	1855	.113	.....
1857	.155	.....	1850	.111	.....
1849	.150	.....	1852	.100	Yellow Fever.
1853	.143	.....	1856	.102	Yellow Fever.
.....	.....	.....	1854	.080	Yellow Fever.

The maxima give us healthy seasons; the minima epidemic seasons; the season in which yellow fever was most prevalent in our city, viz., 1854, is qualified by a record of the smallest proportional mortality by pneumonia. We also present the following table of progression of the mortuary means:

TABLE LXVIII, *Showing the Progression of the Means for Table LXVII:*

EPIDEMIC YEARS.		SPORADIC.		HEALTHY.	
Years.	Ratio.	Years.	Ratios.	Years.	Ratios.
1856	.102	1857	.155	1855	.113
1854	.080	.....	.....	1853	.143
1852	.100	.....	.....	1851	.136
1849	.150	.....	.....	1850	.111
.....	.....	.....	.....	1848	.171
.....	.....	.....	.....	1846	.311
.....
Mean.	108.	Mean.	.155	Mean.	.164

The progression is regular and corroborative of the indications of the preceding table ; we therefore conclude that *pneumonia is directly antagonistic to the yellow fever*. In epidemic years, when miasm most abounds, pneumonia is least frequent ; in the only sporadic year of the series qualified by *monthly mortuary records*, pneumonia is more prevalent ; and in healthy years when miasm is masked or absent, deaths by pneumonia are most frequent.

The catarrhal diseases mentioned in our obituary records, are, bronchitis, influenza, pneumonia, catarrhal fever, pleurisy, sore-throat, congestion of lungs, and laryngitis. By summing up the deaths by all of these diseases which occur in the yellow fever season, and by ascertaining the ratio of the conjoint number so found, as before, to the total number of deaths in each year by all the above diseases, and for all classes of the population, we obtain an independent series of ratios, which serve for a consideration of the relations existing between catarrhal affections generally and the yellow fever ; we accordingly present :

TABLE LXIX, *Showing the Increscence of the Ratios of the Number of Deaths by all Catarrhal Diseases, in August, September and October, con-*
jointly, to the Numbers Expressing for each Year the Total Annual Mortality by all Catarrhal Diseases for all Classes and Ages of the Population,
and for all the Recorded Years :

Years.	Ratios.	Hygienic.	Years.	Ratios.	Hygienic.
1851	.275	Healthy.	1847	.136	.....
1857	.214	.....	1849	.164	.....
1850	.210	.....	1853	.161	.....
1852	.190	.....	1848	.148	.....
1846	.186	.....	1855	.132	.....
1854	.183	.....	1856	.111	Yellow Fever.

The maximum indicates a healthy season, and the minimum a yellow fever season; we present the corresponding table of progression of the means:

TABLE LXX, *Showin the Pragression of the Means for Table LXIX.*

YELLOW FEVER YEARS.		HEALTHY YEARS.	
Years.	Ratios.	Years.	Ratios..
1857	.214	1855	.132
1856	.111	1853	.161
1854	.183	1851	.275
1852	.190	1850	.210
1849	.164	1848	.148
.....	.....	1847	.166
.....	.....	1846	.186
.....
Mean.	.172	Mean.	.183

The progression is regular and corroborates the indication of the preceding table; we therefore conclude that according to our records, *catarrhal diseases, generally, are directly antagonistic to the yellow fever.*

The mortuary history of one other disease upon which ozone exerts an influence is included in our records. This is plthisis pulmonalis. Let us briefly consider its variations and relations to the yellow fever, as we have done for pneumonia and catarrhal diseases.

Consumption is undeniably an ulcerative pneumonic inflammation, caused by the irritating presence of concretions in the lung parenchyma. Affecting the vast expanse of respiratory surface which is designed for the aero-hæmal reactions, like all the other pulmonary and bronchial maladies with which we are acquainted, it should acknowledge the influence of ozone. Though not originated by ozonic influence alone, but most probably by the combined influence of mal-nutrition, low animal heat, and external cold with ozone—while its victims are swept away in all seasons and climates, its progress, intensity, and duration, must be closely dependent upon the ozonicity of the air.

It is probable that the vast mortality by this disease, which is observed in high latitudes, is owing to the greater ozonicity of the air, which is observed in such places. The progress and fatal tendency of the disease, when once acquired, in northern climates, has been known for ages. From remote times it has been

customary to hurry the consumptive from the north to balmy southern regions. Rome, Pisa, Nice, Naples, Madeira, Cuba, are favorite places of resort for phthisies. Celsus recommended Egypt and Alexandria, for consumptives from Italy; warmer climes have always been sought; places removed from the sea-coast, and flat and dry but elevated localities, in preference to hilly or moist places. The consumptive seeks the spot where from the nature of the soil, and by reason of the heat of the climate, *ozone is least prevalent*. It is well known that throughout the world, deaths by *phthisis* are more frequent, and the progress of the malady more rapid, in the ozonic, than in the *miasmatic months*; in winter than in summer. It may also be observed that in England and other countries, a popular idea attributes to the *breath* of herded animals a salutary power over this disease; allowing the supposition to be well founded, it is explicable by the diminution of the ozonicity of the air, produced by the miasmatic effluvia which exist wherever animals are herded or stabled.

We pass on therefore to examine the history of the disease for our own city. Consumption is almost equally fatal, for each month of the year, if we take the mean monthly mortality for fifteen or twenty years; this is owing to the fact that its origin is independent of season, and its termination almost inevitable; a balance is thus maintained between the increased number of deaths by the disease in healthy summers, and the diminution of its fatality which exists in yellow fever years; but its true relation to season and epidemicity at once appears, when we compare the *yellow fever season* for a term of years; thus:

TABLE LXXI, Showing the Increasesse of the Ratios of Deaths by Consumption, for the Months of August, September and October conjointly; and for all Classes of the Population, to the total number of Deaths by this Disease during each Year; calculated for all the recorded Years:

Years.	Ratios.	Hygienic.	Years.	Ratios.	Hygienic.
1850	.26	Healthy.	1855	.236	.....
1851	.308	Healthy.	1853	.235	.....
1854	.265	.....	1830	.231	.....
1848	.261	.....	1856	.225	.....
1847	.250	.....	1851	.223	.....
1852	.250	.....	1846	.204	.....
1857	.248	.....	1849	.195	.....

The maximum indicates health; the minimum a yellow fever epidemic. We also present the corresponding table of the progression of the means.

TABLE LXXII, *Showing the Progression of the Means for Table LXXI:*

YELLOW FEVER YEARS.		HEALTHY YEARS.	
Years.	Ratios.	Years.	Ratios.
1857	.248	1850	.326
1854	.265	1831	.308
1852	.250	1848	.261
1830	.231	1847	.250
1856	.225	1855	.236
1849	.195	1853	.235
.....	.....	1851	.223
.....	.....	1846	.204
Mean.	.236	Mean.	.235

The progression is regular, and corroborates the indication of the preceding table, we therefore conclude that like pneumonia and catarrhal diseases generally, *consumption is antagonistic to yellow fever.*

The greatest mortality occurs with us, *for epidemic yellow fever years*, in the month of September, and for *healthy seasons*, in December. It would appear that the increase of mortality for pestilential seasons in November is due to a delay of fatal termination during the miasmatic months; this termination being however nearly inevitable, it occurs as soon as miasm disappears, and ozone becomes again efficient.

From an examination of our mortuary records we therefore perceive that the yellow fever is antagonistic to *pneumonia*, to *consumption* and to catarrhal diseases; that while the causes of the two classes of disease reciprocally and exactly antagonistic, neither group being active while the other prevails, the influence of the two agents,—*miasm* and *ozone*, upon each other, are so far controlled by the operation of their causes, as to show only a *maximum, minimum, and mean antagonism*. In other words, the tables brought forward prove more exactly that the *primary agent* in the production of either class of disease, is a *primary agent in the prevention of the other.*

The figures derived from our records, entirely confirm the

previsions of rational deduction ; diseases could not be antagonistic unless their causes were so ; unless ozone and miasm were actively opposed to each other, their respective effects upon the animal body could not exhibit the *antagonism which the figures demonstrate*. Not only is the antagonism of catarrh and yellow fever absolute with respect to epidemicity, but we have good grounds for believing that the influence of miasm and of ozone may be exerted within brief periods of time upon the same animal body. Their action upon the organism cannot, of course, be simultaneous, since this must, of necessity, imply preponderance of one or abolition of both ; but may be exerted successively, after longer or shorter periods, within the course of an existing disease. We know that catarrhal symptoms may supervene upon many morbid states ; and there would seem to be no reason why they should not likewise occur in a malady caused by miasm, but whose influence upon the system is now temporarily annulled or replaced by that of ozone itself, an actively morbific agent ; especially when this agency consists mostly in irritation of the membranes of the air passages. The antagonism of ozone to miasm exists, in this connection, both within and without the body, and as the two agents create disease, they may both influence the same individual, producing apparently a hybrid affection. Thus for example, two poisons, chemically antagonistic, may be swallowed at the same moment with impunity, but will each produce its characteristic effect if taken some little time after the other. We cannot doubt that the disease termed *dengue*, or break-bone fever, is a so-called hybrid of this class ; that it is a catarrho-miasmatic fever, caused by the successive action of miasm and of ozone. As either influences the system first, so will its effects be first revealed. The disease may therefore be primarily catarrhal, and eventually become miasmatic ; or in the unacclimated, it may be first miasmatic, and shortly after, catarrhal, and it is worth noticing that this very sequence is found to exist with regard to the fever which frequently attacks strangers in New Orleans, where it has received the name of *acclimating-fever*.

Seasons, therefore, when the thermometer ranges high, but the barometer is very variable, should be those in which *dengue*

prevails. In 1850 these characteristics were notably united, and they may be said to belong habitually to those months of our year, viz., July and August, in which the break-bone fever commonly occurs.

The emission of miasm is neither continual nor uniform, except in epidemic seasons, and it cannot therefore be always exactly neutralized by ozone, for the production and dissimulation of this agent in the air is likewise subject to great fluctuations. The ozonicity of the air sometimes abruptly ascends, overpowering miasm, and favoring a catarrhal constitution; it sometimes also, as abruptly falls, leaving miasm unmasked, and rendering the constitution of the air exactly the reverse. Thunder storms are notably a cause of sudden disturbance of the ozonic balance of the air, their great frequency in 1850 will be recollected as well as their frequency in July and August ordinarily, which are especially our bilio-catarrhal and catarrhal months.

Storms and gusts of wind no doubt tend to produce catarrh, by suddenly depressing the intensely ozonic strata of the upper atmosphere. This ozonic air must nevertheless be much diluted before it reaches the earth, for it is highly probable that were it broadly spread over the surface, without any diminution of its ozonic concentration, violent epidemics of influenza would often ensue. Occasional influxes of highly ozonized blasts are known to occur during the seasons, by direct observation. Indeed, from the manner in which ozone is formed and supplied to us, it is quite impossible that the air which reaches us should exhibit even a curvilinear progression from one ozonic gradation to another, much less a seasonal uniformity. Variability is inevitable; and the invasion of catarrh must be in like manner, unforeseen, and irregular. It results therefore, that if ozone and miasm are accurately and uniformly balanced, health must ensue; if miasm or ozone predominates, the peculiar effects of each are evinced; but if while either agent generally prevails throughout a season, the other should make occasional, but powerful eruptions, hybrid diseases showing both miasmatic and catarrhal symptoms will result. The tables presented exhibit the antagonism which exists between "catarrh" and the yellow fever; we proceed to show that the validity of their figures are entirely substantiated

by a distinct set of records, whose uniform testimony is only interrupted by influences pertaining to modes of building, to irregularities of reports made by resident physicians, and occasionally to the omission of important notes upon the books, respecting the prevailing diseases. For it is plain, that if miasm be sheltered by high buildings from surrounding blasts, and secreted from the ozonic influence of more freely moving currents, or if it be produced in any close place with uncommon intensity, it is quite possible that a few cases of miasmatic disease may occur even in the midst of otherwise healthy or even catarrhal seasons. And conversely, in very clean and anti-miasmatic vicinities, an amount of ozone may produce isolated cases of catarrh, that would be entirely inefficient in miasmatic localities. In each case, therefore, it is possible that during an epidemic of either disease, sporadic cases may occur of the opposite type, the antagonism being entirely absolute only for perfectly ventilated or uniformly *unclean* cities, *conditions never fulfilled*. On the other hand, however, it will be found that no *epidemic of catarrh* can coincide with an *epidemic of the yellow fever*; that the break-bone fever may be accompanied with either miasmatic or *catarrhal disease*; and that catarrh qualifies only the *commencement* and *decline* of epidemic yellow fever, and rarely its *aemè*. We proceed therefore to an examination of the monthly records of the South Carolina Medical Society. This is our only available record for *prevailing diseases*, though often insufficient, from its containing simply a record of the diseases of the *entire past month*, which is too long a period of time. Fluctuations of disease frequently occur from day to day, and as the mortuary records are made for each day, so likewise should the prevailing diseases be registered once at least for each week. Even the monthly record is occasionally absent; as when no meeting was held, in consequence of the prevalence of an epidemic. As a general rule, we take for granted that where diseases are not specially mentioned in these records, that they did not prevail. This rule will admit of exceptions, many of which can be corrected collaterally; it will at least expose to fewer chances of error than any other which we are justified in proposing.

The same diseases are considered *catarrhal*, that we included

in table LXIX; yellow fever is occasionally termed *stranger's fever*, and in old records *malignant bilious fever*.

1857.—“*Sporadic*” yellow fever; 13 deaths.

July; neither catarrh nor yellow fever. August; catarrhal. September; bronchitis and catarrh. October; first week, yellow fever, last three weeks, pneumonia and catarrh. November; pneumonia and catarrh.

Summary.—Catarrh prevailed throughout this season, and the cases of yellow fever which occurred were few; it would even appear, that catarrh ceased for a week or ten days during the latter part of September and beginning of October, and the yellow fever consequently appeared.

1856.—“*Epidemic*” yellow fever; 212 deaths.

July; one case of mild yellow fever; one case of protracted catarrh. August; epidemic yellow fever. September; epidemic yellow fever. catarrhal affection, by one physician. October; declining yellow fever, catarrh, catarrhal fever. November, catarrh.

Sum..—Catarrh prevailed at the commencement and end of this season, yellow fever in the middle, and the cases of *catarrh* mentioned for September were few.

1855.—No yellow fever.

July; neither catarrh nor yellow fever. August, neither catarrh nor yellow fever. September; catarrhal affections, pneumonia. October; pleurisy, pneumonia, catarrhal affections. November; bronchitis, pneumonia, sorethroat, catarrh.

Sum..—Catarrh prevailed throughout the season; yellow fever was consequently absent.

1854.—“*Epidemic*” yellow fever—627 deaths.

July; neither catarrh nor yellow fever. August; epidemic yellow fever. September; epidemic yellow fever. October; epidemic yellow fever. November; lingering cases of yellow fever.

Sum..—Yellow fever prevailed throughout this season; “*catarrh*” was consequently absent.

1853.—No yellow fever.

July; August; neither catarrh nor yellow fever. September;

neither catarrh nor yellow fever. October; bronchitis and catarrh November; neither catarrh nor yellow fever; (two cases of yellow fever occurred in strange subjects recently from New Orleans to Havana.)

Sum.—Neither catarrh nor yellow fever prevailed in this season, except in the month of October, which was catarrhal.

1852.—*Epidemic yellow fever, 310 deaths.*

July; neither catarrh nor yellow fever. August; epidemic yellow fever. September; yellow fever, break-bone fever, catarrh. October; yellow fever. November; “sporadic” yellow fever.

Sum.—Yellow fever prevailed in this season; what catarrh supervened; was consequently “sporadic,” and was associated with break-bone fever, which was observed only while the catarrhal disposition existed.

1851.—*No yellow fever.*

July; influenza, catarrhal affections. August; break-bone fever. September; bronchitis, influenza, pulmonary congestions. October; bronchitis, catarrhal affections. November; severe bronchitis, catarrh, catarrhal fever.

Sum.—Catarrh prevailed throughout the season; yellow fever was consequently absent. The break-bone fever was found associated with yellow fever in 1852, we find it associated with catarrh in 1851; being obviously a mixed catarrhal and miasmatic disease—the cause of the catarrh antagonizing the miasmatic tendency, and restoring the patient to health.

1850.—*No yellow fever.*

July; pneumonia. August; pleurisy, bronchitis, influenza, break-bone fever. September; break-bone fever. October; bronchitis, bronchitis complicated with break-bone, fever, tonsillitis, sorethroat, catarrh, influenza. November; sorethroat, influenza.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1849.—*Epidemic yellow fever—125 deaths.*

July; pleurisy, bronchitis. August; epidemic yellow fever. September; sporadic yellow fever, and catarrhal affections. October; “sporadic” yellow fever, and catarrho-bilious or break-bone fever. November; one case of yellow fever.

Sum.—In the commencement of this season epidemic yellow fever prevailed; catarrh was consequently absent. In the latter months, yellow fever and catarrh existing together, both were “sporadic.”

1848.—*No yellow fever.*

July; neither catarrh nor yellow fever. August; pneumonia; September; sorethroat. October; bronchitis, pneumonia. November—;

Sum.—Catarrh prevailed throughout the yellow fever season; the yellow fever was consequently absent.

1847.—*No yellow fever.*

July; pneumonia. August; pneumonia, catarrh. September; bronchitis. October; influenza, catarrhal affections. November; bronchitis, sorethroat, catarrhal affections.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1846.—*No yellow fever.*

July; Neither catarrh nor yellow fever. August; catarrhal affections. September; catarrhal affections. October; sorethroat. November; catarrhal affections.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1845.—*No yellow fever.*

July; sorethroat. August; tonsillitis, catarrh. September; bronchitis, sorethroat, catarrh. October; catarrh. November; catarrh, pulmonary congestions, pneumonia.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1844.—*No yellow fever.*

July; catarrhal fever, sorethroat. August; neither catarrh nor yellow fever. September; neither catarrh nor yellow fever. October; catarrhal affections, sorethroat. November; catarrh, sorethroat, pneumonia.

Sum.—Catarrh prevailed at the commencement and close of this season; neither catarrh nor yellow fever existed during August or September.

1843.—“*Sporadic*” yellow fever—3 deaths.

July; influenza. August; [neither catarrh] nor yellow fever. September; sporadic yellow fever in the upper wards of the city. October; sporadic yellow fever in the upper wards of the city. November; pneumonia.

Sum.—Catarrh prevailed at first; yielded to sporadic yellow fever, reappearing without the yellow fever at the close of the season.

1842.—No yellow fever.

July; Catarrhal affections. August; sorethroat.¹ September; neither catarrh nor yellow fever. October—; November; catarrhal affections.

Sum.—While catarrh prevailed yellow fever was absent.

1841.—*Sporadic yellow fever.*

July; neither catarrh nor yellow fever. August; neither catarrh nor yellow fever. September; sporadic yellow fever. October; sporadic yellow fever. November; catarrh, pneumonia, sorethroat.

Sum.—While catarrh prevailed, yellow fever was absent; while yellow fever prevailed, catarrh was absent.

1840.—*Epidemic yellow fever—23 deaths.*

July; one case of yellow fever. August; yellow fever. September; yellow fever. October; yellow fever.¹ November; neither catarrh nor yellow fever.

Sum.—Yellow fever prevailed throughout this season; catarrh was consequently absent.

1839.—*Epidemic yellow fever—133 deaths.*

July; sorethroat, yellow fever. August; epidemic yellow fever; September; epidemic yellow fever. October; yellow fever. November; catarrh, sorethroat.

Sum.—While catarrh existed, yellow fever was just commencing or absent; while yellow fever was epidemic, catarrh was absent.

1838.—*Epidemic yellow fever—350 deaths.*

July; sorethroat. August; sorethroat, yellow fever. September; epidemic yellow fever. October; yellow fever, pneumonia, pleurisy. November; neither catarrh nor yellow fever.

Sum.—While catarrh existed, yellow fever was absent, incipient, or declining.

1837.—*Epidemic yellow fever.*

July; catarrhal affections, sorethroat. August—; September; one case of yellow fever; October; sorethroat, catarrh, yellow fever. November; sorethroat; pneumonia.

Sum.—While catarrhal affections prevailed, yellow fever was absent or “sporadic”—while yellow fever prevailed, catarrh was absent or sporadic.

1836.—*Asiatic cholera; no yellow fever,—392 deaths*

July; catarrh. August; cholera asphyxia, epidemic. September; epidemic cholera asphyxia. October; “sporadic” cholera, catarrh. November; pneumonia, catarrh.

Sum.—While catarrh existed, cholera was absent or sporadic; while cholera was prevalent, catarrh was absent. Cholera again showed its miasmatic origin by allowing the influence of an anti-miasmatic agent.

1835.—*Epidemic yellow fever—24 deaths.*

July; neither catarrh nor yellow fever. August; catarrhal affections, yellow fever. September; epidemic yellow fever. October; catarrhal affections. November; catarrh.

Sum.—While catarrh prevailed, yellow fever was absent or incipient; while yellow fever prevailed, catarrh was absent.

1834.—*Epidemic yellow fever.—49 deaths.*

July; catarrhal affections, break-bone fever. August; bronchitis, catarrh, pneumonia, yellow fever. September; epidemic yellow fever. October; yellow fever and catarrhal affections November; pneumonia, influenza, catarrhal affections, one case of yellow fever.

Sum.—While catarrh prevailed, yellow fever was absent, incipient, or declining; while yellow fever prevailed, catarrh was absent.

1833.—*No Yellow fever; catarrh throughout the season.*

July; sorethroat. August; neither catarrh nor yellow fever. September; cynanche. October; catarrh. November; catarrhal affections, sorethroat, pneumonia.

Sum.—Catarrh prevailed throughout this season, yellow fever was consequently absent.

1832.—*No yellow fever; catarrh throughout the season.*

July; catarrh. August; catarrh. September; catarrh. October; catarrhal affection. November; sorethroat, catarrh.

Sum.—Catarrh prevailed throughout this season; yellow fever was consequently absent.

1831.—*No yellow fever.*

July—; August; cynanche, catarrhal affections. September; pneumonia, catarrhal affections. October; catarrhal fever. November; catarrhal fever.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1830.—*Yellow fever, 31 deaths; "sporadic catarrh."*

July; catarrh, sorethroat. August; sorethroat, catarrhal fever. September; yellow fever, catarrhal fever. October; pneumonia, sorethroat, catarrhal affections. November; catarrh, sorethroat.

Sum.—While catarrh prevailed, yellow fever was absent; while yellow fever prevailed, catarrh was “sporadic.”

1829.—*No yellow fever.*

July; catarrh, sorethroat, one case of yellow fever in a child. August; sorethroat, catarrh. September; catarrhal affections. October; catarrhal affections. November; catarrhal affections.

Sum.—Catarrh prevailed throughout the yellow fever season; yellow fever was consequently absent or possibly, for July very occasional.

1828.—*Epidemic yellow fever—26 deaths.*

July—; August; yellow fever. September; cynanche, pneumonia, extension of yellow fever arrested. October; catarrhal affections, one case of yellow fever. November; catarrh, sorethroat.

Sum.—While yellow fever prevailed, catarrh was absent; when catarrh began to prevail, yellow fever at once declined.

1827.—*Epidemic yellow fever—62 deaths.*

July; neither catarrh nor yellow fever. August; yellow fever.

September; neither catarrh nor yellow fever. October; sore-throat. November; catarrhal affections.

Sum.—While yellow fever prevailed, catarrh was absent; while catarrh prevailed, yellow fever was absent.

1826.—*No yellow fever.*

July; one case of sporadic fever. August; neither catarrh nor yellow fever. September; catarrhal affections. October; sore-throat, catarrhal affections. November; catarrhal affections.

Sum.—Catarrhal affections prevailed throughout the yellow fever season, consequently yellow fever did not appear.

1825.—*No yellow fever.*

July—; August; catarrh. September; catarrhal affections, one case of yellow fever in the upper part of the city. October—; November; pneumonia, catarrhal affections.

Sum.—Catarrhal affections prevailed throughout the season; yellow fever was absent, or possibly “sporadic.”

1824.—*Epidemic yellow fever; 231 deaths.*

July; neither catarrh nor yellow fever. August; epidemic yellow fever. September; epidemic yellow fever. October; sore-throat, catarrhal fever; the yellow fever on the decline. November; pneumonia, catarrhal affections.

Sum.—While the yellow fever prevailed catarrh was absent; while catarrh prevailed the yellow fever was “on the decline” or absent.

1823.—*No yellow fever.*

July; sore-throat. August; sore-throat, catarrhal affections. September; sore-throat, catarrhal affections. October; sore-throat, catarrhal fever. November; influenza, catarrhal fever.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1822.—*No yellow fever.*

July; sore-throat, catarrhal fever. August; sore-throat. September; sore-throat, catarrhal fever. October; cynanche, catarrhal fever, pneumonia. November; sore-throat.

Sum.—Catarrh prevailed throughout this season; the yellow fever was consequently absent.

1821.—*No yellow fever.*

July ; sorethroat. August ; sorethroat. September ; sorethroat. October ; sorethroat, catarrh. November ; catarrhal affections, violent pleurisies, sorethroat.

Sum.—Catarrh prevailed throughout this season ; the yellow fever was consequently absent.

1820.—*Sporadic yellow fever.*

July ; sorethroat. August ; sorethroat prevalent. September ; influenza very prevalent. October— ; November—

Sum.—Catarrh prevailed during all the reported months, from which yellow fever was absent ; concerning the latter months there is no record.

1819.—*Epidemic yellow fever ; 176 deaths.*

July— ; August ; epidemic yellow fever. September ; epidemic yellow fever. October ; sorethroat, influenza, one case of yellow fever. November ; neither catarrh nor yellow fever.

Sum. While yellow fever was epidemic, catarrh was absent ; while catarrh prevailed, yellow fever was scarcely sporadic.

1818.—*No yellow fever.*

July— ; August ; catarrhal fever. September ; neither catarrh nor yellow fever. October— ; November—

Sum.—While catarrh existed, yellow fever was absent.

1817.—*Epidemic yellow fever ; 270 deaths.*

July ; yellow fever. August ; yellow fever. September ; epidemic yellow fever. October ; yellow fever. November—

Sum.—The yellow fever prevailed throughout this season ; catarrh was consequently absent.

1816.—*No yellow fever.*

July ; catarrhal fever. August ; neither catarrh nor yellow fever. September ; sorethroat. October ; neither yellow fever nor catarrh. November—

Sum.—While catarrh prevailed, the yellow fever was absent.

This series of forty-two years will amply suffice for our consideration of the subject. The antagonism is as absolute and as clearly recorded as is possible from the nature of the phenomena and of the archives. We have plainly seen :

1st. That epidemics of yellow fever, and of catarrh *never* co-exist.

2d. That break-bone fever may occur in a summer either generally *catarrhal*, or generally *miasmatic*—and that this disease affects principally the origin and decline of the yellow fever when it occurs in a miasmatic season—and the *aeme* of the season when it qualifies a catarrhal *epidemic*.

3d. That when catarrh occurs during the prevalence of yellow fever, the catarrh is “*sporadic*” (that is to say, the cases are few and widely disseminated), and that catarrh is mostly absent during yellow fever seasons.

4th. That when yellow fever occurs during the prevalence of catarrh, the yellow fever is “*sporadic*”; and that yellow fever is mostly absent during catarrhal seasons.

5th. That catarrh prevails almost exclusively during the origin and decline of the yellow fever.

6th. That the yellow fever when it appears during a catarrhal season, affects the most miasmatic part of the season, viz.; the end of September and beginning of October.

7th. That from the recorded history of the only visitation of Asiatic cholera to our city, as an epidemic, this disease undeniably shows a miasmatic origin, by exhibiting relations to catarrh, precisely similar to those which obtain between the yellow fever and catarrh. We therefore conclude generally, that, from a consideration of forty-two years, the yellow fever is directly antagonistic to catarrhal diseases.



ART. II.—*Outline of Observations on Hospital Gangrene as it Manifested itself in the Confederate Armies, during the American Civil War, 1861-1865:* By JOSEPH JONES, M. D., Professor of Chemistry in the Medical Department of the University of Louisiana.

THE present “outline” was prepared in accordance with the order of the Surgeon General, assigning the author to special duty in the investigation of camp diseases, and in its official

deliverance was accompanied with the following explanatory note.

C. S. OF AMERICA, AUGUSTA, GA., August, 1864.

Surgeon General S. P. MOORE. C. S. A.

Surgeon Generals's Office, War Department Richmond, Va.

Sir : In accordance with the request of the Surgeon General "that the general results of my investigations upon hospital gangrene, should be forwarded to the Medical Department, as soon as practicable after my return from Virginia," I have the honor to submit the following brief outline of my labors.

In the final and full report, the general results here announced, will be supported and illustrated by cases, experiments, and chemical and microscopical investigations.

The general hospitals attached to the Army of Tennessee, at the present time afford a wide and important field for the full investigation of hospital gangrene and pyæmia, and I design entering immediately upon the extended pathological labors projected at Andersonville, and in the field and general hospitals of the Western Department.

The Surgeon General will please excuse the imperfect manner in which these results are now presented, as it was impossible to do justice to the subject in the brief space of time, which has been occupied with the numerous preparations necessary to the pathological investigations ordered by the Surgeon General ; and especially in the present state of my health, after my energies have been greatly taxed for twelve months in numerous inspections, and in the preparation of an extended report on camp fevers.

Very respectfully your obedient servant,
JOSEPH JONES, Surgeon, P. A. C. S.

I.—*Outline of the Symptoms and Changes of the Solids and Fluids Characteristic of Hospital Gangrene as it has Manifested itself in the Confederate Armies. Constitutional Disturbances amongst the earlier symptoms of Hospital Gangrene; Local and Constitutional Origin of the Disease.*

In many cases the appearance of gangrene in the wounds was preceded by fever, which was sometimes ushered in by a chill. This fever was most commonly attended with loss of appetite, depression of spirits, constipation of the bowels, and such an enfeebled irritative action of the circulatory apparatus, as denoted a depression of the vital, nervous and muscular forces.

It has been difficult to determine whether the fever was the resultant, or the necessary accompaniment of the early changes in the wound. It is, however, a point of interest in its bearing upon the determination of the nature of the disease, as well as upon the treatment, that the constitutional symptoms in many cases do precede such local changes as are sufficient to attract the attention of the patient and physician.

The Confederate troops have been so often exposed to malarious

influences, that it is impossible to determine in most cases the cause and nature of the chill which sometimes precedes the fever. Without doubt, it was in some cases at least, of malarious origin. When the system has been brought under the influence of malaria, any depressing cause, as a gun-shot wound, especially if unfavorable changes are set up in the injured parts, may induce true chill and fever.

In the general hospitals attached to the Army of Northern Virginia, to the Department of South Carolina, Georgia and Florida, and to the Army of Tennessee, I have seen a number of cases of extensive hospital gangrene, in gun-shot wounds, and of those resulting from amputation and various operations, in which the disease was said to have appeared as a local affection, without any constitutional symptoms. Loss of appetite and febrile excitement was said to have been entirely absent, or else to have appeared only after the local disease had progressed to a considerable extent. These cases certainly manifested constitutional disturbances of the gravest character, when they passed under my examination, and in no case was I able to discern any accurate or critical record of the condition of the patients, and especially of the circulation, respiration, and temperature, and of the alimentary canal and nervous system, in the earliest stages of the disease. Such testimony to the local origin of hospital gangrene, should therefore be regarded only so far as to excite careful observations and investigations, upon the first recognizable symptoms. The question of the local or constitutional origin of hospital gangrene, can be settled definitely only by extended and minutely recorded observations upon the whole progress of the disease, from the first deviation from the condition of health. It is important to consider this question well, because the best writers on this subject differ in their views; and because it is intimately connected with every theory of the origin and nature of the disease, and with the great practical question, whether hospital gangrene, is to be treated locally or constitutionally, or by both means combined.

In attempting to settle this question by an appeal to authority, the great difficulty is the want of accurate and minute observation of the earliest symptoms preceding the actual appearance of

the gangrene. Thus, as far as our knowledge extends, no writer up to the present time has given any critical observations upon the changes of the temperature, urine and blood, at any period of the disease; and by the majority of writers, even the changes of the pulse and tongue are noticed only after the establishment of the gangrene. The simple announcement that the disease commenced as a *local affection and manifested no constitutional symptoms, until a certain period,* should not be taken as a final decision. Such general statements should be sustained by critical observations upon the most obvious phenomena of the animal system.

In its mode of origin, hospital gangrene may be viewed in four ways:

1st.—*As a local disease, communicable only by contact with animal matter in a certain state of change or decomposition.*

Whatever constitutional disturbances arise, they are always consequent to, and upon, the changes in the wound itself, and arise chiefly from a propagation of the derangement by nervous sympathy. If this proposition be true, amputation would be one of the most certain methods of removing the disease.

2d.—*As a constitutional disease.*

The constitutional disturbance manifesting itself in gangrenous inflammation, in any wounded surface, may be produced either by previous exposure and bad diet; or by the constant inhalation of an atmosphere deprived of its active oxygen, and electrical fluid, and loaded with carbonic acid gas and sulphurated hydrogen and other deleterious gases and animal matters. According to this view, when the constitution is deranged, the blood altered, and the forces depressed, by such agencies, the disease may appear in any wounded surface, apart from any direct application of poisonous animal matter.

3d.—*As both local and constitutional in its origin.*

Animal matter in a certain state of decomposition is capable of acting upon a wounded surface, and of developing gangrenous inflammation; or the system may be so depressed by the action of gases and foul air inhaled, and by the previous exposure and bad diet, that this form of inflammation may result from the de-

pression of the forces, the derangement of nutrition, and the consequent degeneration of the wounded part.

If the disease arises locally, the absorption of the gangrenous matter commences as soon as it is applied to any wounded surface, and goes on continuously as long as any gangrene is present; and the decomposing matters entering the blood, derange its composition and the nutrition of the body and depress the forces. In this way the constitutional derangements may be manifested before the local changes are evident to the senses, without at all standing in the relation of cause and effect. The admission of its local and constitutional characters, at the same time, is not at all contradicted by the fact, that we may have in the same patient one gangrenous wound and another entirely free from the disease. Neither does it follow, that because the absorbed matters disturb the nutrition and composition of the blood, and derange to a certain extent the forces, therefore amputation will not arrest the disease. Whether or not the severing of the gangrenous mass from the body will arrest the disease, will depend not upon the mere fact of the absorption of the gangrenous matter, but upon the extent to which it has deranged the nutrition and depressed the forces. Thus the poison of the rattlesnake produces death of the immediate parts into which it is injected, and at the same time that portion which is absorbed, alters the blood, acts upon the heart, deranges the nutrition, disturbs the circulation and respiration, and depresses the venous and muscular systems. If the limb poisoned and rendered gangrenous by the poison of the rattlesnake, be amputated in the sound parts, it does not follow, that because the constitution has been affected by the poison absorbed, that therefore the stump must also become gangrenous. Neither does it follow that because the gangrene was not reproduced in the stump, therefore the poison of the rattlesnake did not act constitutionally.

In the case of amputation for a gangrenous wound, the re-appearance of gangrene in the wound, will depend on the amount of the matter absorbed from the local source, and the extent to which it has deranged the system.

4th.—*The disease may arise from the action of a specific poison, which acts in a manner similar to that of small pox, measles or scarlet fever.*

After the introduction of the poison either through the wounded surfaces, or through the skin and lungs, certain constitutional changes are excited which precede the manifestation of the local symptoms, and are connected intimately with, if not in the relations of cause and effect with the local manifestations. In other words, the specific cause of hospital gangrene, may induce such changes in the constitution of the blood, and so modify the nutrition of the body and so depress the forces, that however the poison may have been received by direct contact to the wound, or through the atmosphere, all local inflammation may manifest its specific gangrenous action.

The third proposition expresses most nearly our views; for it is capable of demonstration by cases and instances which I have recorded and observed:

First—That hospital gangrene may arise in those exposed to the exhalations from gangrenous wounds, without any abrasion of the surface.

The poison inducing hospital gangrene, is capable of entering the system through the pulmonary and cutaneous systems, and of exciting gangrene in parts which were, perhaps, in a state of defective nutrition, degeneration or inflammation or depressed in vitality; but which as far as known, were not exposed in any manner to the direct action of the poisonous matter, and over which the integuments were intact, until they were involved by the gangrene from within.

Second—That hospital gangrene can be communicated through the atmosphere to wounded surfaces, without any direct application of the matter.

Third—That in some cases, after the wounds had been subjected to the action of the cause of hospital gangrene, a certain period of time elapses before the disease appears.

Fourth—That in some cases poisonous matters are so rapidly absorbed from the infected atmosphere of the crowded wards, and the diseased action is propagated with such rapidity from the local injury to the central organs in constitutions broken down by bad diet, exposure, and by the influence of the foul emanations from the wounded and sick crowded into badly ventilated hospitals, that death results

from the effectual and almost immediate poisoning of the system, before the local disease has progressed to any extent.

PROGRESS AND CHARACTER OF THE LOCAL CHANGES.

In many cases of gun-shot wounds, which subsequently became gangrenous, the attention of the wounded man was first called to the injured parts, by severe and darting pains in the wounds. These pains were sometimes compared by the Confederate soldiers to the pricking of ten thousand needles.

In other cases, the early stages of the disease were announced by a stinging or itching sensation; whilst in some cases there was little or no change in the sensation of the parts.

In some cases, in the earliest stages, the wounds presented a dark-red glazed surface; the granulations became altered in appearance, and rapidly disappeared; the discharge of healthy pus disappeared and was followed by a reddish and greenish sanguineous *fœtid* discharge. The parts around the wound became painful and swollen, and frequently a well-defined red and purplish indurated border in the sound skin surrounded the wound. The wound itself rapidly assumes a swollen, ragged appearance (the gangrenous matter often rising several lines above the surrounding tissues), with swollen ragged, everted edges. With the infiltration of the diseased structures, and the consequent elevation of the surface and eversion of the edges of the wound, the glazed, dark-red appearance of the wound disappears, and the gangrenous mass presents a greenish and grayish color.

When the wounds were extensive, the gangrene would frequently appear in one or more circumscribed spots of a dark-gray and greenish color, and gradually spread over the entire surface and destroy the surrounding tissues. I have seen extensive ulcerated surfaces, in which the gangrenous parts remained almost stationary, whilst the surrounding portions of the wound presented a bright, florid appearance.

In cases of amputation, in patients whose systems were depressed and deranged by bad food and foul air, as in the case of prisoners in filthy, crowded military and civil prisons, hospital gangrene frequently made its appearance, in the wounds, in from twenty-four to seventy-two hours; and in such instances, the

first symptoms of the disease were manifested in the absence of any adhesive effusion, or inflammation, the swelling of the flaps, the rapid tearing out of the sutures, and the appearance of a deep blue and purplish discoloration of the skin around the edges of the wound. During the active stages of hospital gangrene, the surrounding parts are swollen and infiltrated with serum, and the temperature of the parts immediately around the diseased structures is elevated somewhat above that of the parts beyond.

As far as my observations extend, the serous fluid infiltrating the tissues, is liquor-sanguinis, and is capable of coagulation. The blood-vessels surrounding a gangrenous wound are always engorged with blood, as if the capillaries had lost their power to contract; and if an incision be made around the wound, in the unbroken skin, those distended vessels bleed freely. I have noticed in several cases of severe gangrene, that after serious haemorrhage, the recovery of the patient was very rapid, as if the emptying of the surrounding engorged vessels had contributed to the rapid improvement of the wound.

The deep purple and blue color of the skin surrounding gangrenous wounds which are spreading rapidly, appear to be due to the want of oxygenation in the blood, and also to the fact that this blood is altered and contaminated, and in fact poisoned by the neighboring gangrenous matter. The deep blue and purplish color in the surrounding skin, is one of the most infallible signs of the active progress of the disease. After the disappearance of the gangrene, the blue and purple border either disappears entirely, or else fades away.

When the system has been thoroughly poisoned by the absorption of the gangrenous matter from a large wound, and by the constant inhalation of the foul atmosphere of the crowded ward, I have, in a number of instances observed parts removed from the immediate wound, but generally upon the same limb, take on the gangrenous inflammation, and that, too, without any apparent cause as pressure.

In such cases, a purple or blue spot is first perceived, or the color might more properly be termed, in some cases, an ash-gray or leaden hue. The cuticle is sometimes raised and contains serum below. The rapidity of the progress of the gangrene in

such spots, will depend chiefly upon the extent to which the system has been poisoned by the absorption of the deleterious matters. I have seen the skin in the affected spot melt away in twenty-four hours, into a grayish and greenish slough, whilst a deep blue and purple, almost black areola surrounding the dead mass, spread rapidly in ever widening circles, whilst the skin and tissues within over which it had just passed changed rapidly to the ash-gray and green and bluish hue characteristic of this form of gangrene. This is witnessed most generally in the worst and fatal cases. In some cases the gangrenous slough presents a black hard crust, which can only be removed by poultices. As long as the crust remains, the case progresses unfavorably. And, in fact, as far as my experience extends, these are amongst the most inveterate and obstinate cases.

Hospital gangrene destroys the cellular and adipose tissues most rapidly; the muscles, nerves, large blood-vessels and the bones resist its action for a greater length of time. It is not uncommon to see large surfaces of muscles and even bones exposed, the skin and cellular tissue having been completely dissected away by the disease. The blood-vessels yield more readily in hospital than in *dry* gangrene, and hence in the former, haemorrhage, both venous and arterial, is very common, and in some cases, both directly and indirectly becomes a cause of death. From this cause it happens that the gangrenous tissues frequently presents a mottled appearance from the haemorrhages of limited extent taking place from the smaller vessels destroyed in the ravages of the disease. Whilst there is a tendency to the coagulation of the blood in the vessels passing into and through the gangrenous mass, still the tendency is less, and the coagulation far less perfect than in *dry* gangrene. This difference may be due to the more rapid progress of the disease, as well as to differences in the quantity and quality of the fibrous element in the different forms of gangrene.

As far as my observations extend, the bones do not yield readily to hospital gangrene, and even when exposed, and in part surrounded by the disease, with the exception of slight exfoliation of the outer table, little or no erosion or death takes place; and when the disease is arrested, granulations spring up rapidly and cover the diseased surface of the bones.

Several instances have come under my observation, in which gangrene existed in structures beneath an apparently sound skin. Thus, in the case of a federal prisoner, who received a slight wound upon the external portion of the left thigh, just above the knee-joint, at the battle of Chickamauga, and who suffered for several days before death with an abscess in the groin of the injured limb, from which sanguous fetid matter issued, and who died, apparently, from the exhaustive effects of colliquative diarrhoea, resulting, apparently, from the absorption of the products of the disorganizing tissues, the skin over the injured thigh and buttock appeared sound, whilst the cellular and muscular tissues of the thigh and buttock were in a state of gangrene, presenting blue and green and greenish grey disorganized matter. In this case, the muscular structures were so disorganized that they were crushed by the slightest pressure. Under the microscope, the muscular substance and structures appeared to be almost completely disorganized, and nothing but the fibrous tissue remained. Innumerable granules and granular masses, crystals of the coloring matter of the blood, prismatic crystals of the phosphates of ammonia, magnesia and lime, altered blood corpuscles, detached masses of cellular tissue and of muscular fibres, in which the striae were fast disappearing, together with oil globules, all pervaded by a fetid, greenish, sanguous fluid, constituted the mass of the gangrenous muscles. The disorganized structures were strongly impregnated with ammonia, one of the products of the disintegration of the nitrogenized constituents, and the normal acid reaction of healthy muscular structures, was charged to a strongly alkaline reaction.

In another case where this operation of ligating the bronchial artery was performed to arrest haemorrhage from a gangrenous wound in the fore-arm, involving structures around the elbow-joint, the cellular tissue surrounding the artery was found to be in a gangrenous state, although no suspicion was entertained of the existence of gangrene, before the operation was performed. It is probable that in this case the spread of gangrene had been very rapid along the fibrous tissue surrounding the great vessels and nerves.

In a case of typhoid fever, treated in a gangrene ward, in the

midst of patients suffering from hospital gangrene, during convalescence from the fever, a painful swelling appeared upon the margin of the perinæum and left buttock. The skin over the affected part assumed a bluish ash-color and the lancet passed readily through the dead integuments and tissues, and a large quantity of dark, grumous, tar-like gangrenous matter, of a most offensive smell, flowed out. The odor was so offensive that it was almost impossible for the attendants to remain in the tent. After the evacuation of the dark-fetid matters, the structures within presented the general appearance of hospital gangrene and not of an ordinary abscess. The spread of the gangrene was rapid and distressing in this case.

I have frequently seen a narrow strip of apparently sound skin passing between two gangrenous wounds and even passing across a large gangrenous mass.

When gangrene terminates favorably, the surface from which it is removed, presents a bright red and scarlet exquisitely sensitive mass of luxuriant granulations, which are highly vascular, and bleed upon the slightest touch. So sensitive is this surface, that the slightest touch will frequently cause the patient, even though he may be a stout brave soldier, to cry like a child. Although the appearance here described is highly favorable, at the same time many cases terminate fatally even after the removal of the gangrene, from various causes; as exhaustion of the system by profuse suppuration, the depressing effects of the previous disease, the permanent derangement of the digestion caused during the active stages of the disease, by bed sores, by pyæmia, and by diarrhœa.

After the establishment of healthy granulations, the bones which have been denuded by the gangrene, will frequently be rapidly covered by a luxuriant growth of granulations. When the bones of the leg have been denuded in a stump, after amputation, I have observed a most luxuriant crop of granulations sprouting out of the medulla of the bone like a fungous growth. In most cases these granulations die, and the injured bone exfoliates. When the bone has been exposed in its length, the outer table will frequently scale off, and the destruction of bone proceeds no further, and the new tissue form over the denuded bones.

As the disease progresses, the complexion assumes an unhealthy, dusky, leaden hue, the eyes express anxiety, depression and nervous irritation and exhaustion, the pulse becomes small, frequent and feeble, and indicates an irritable, enfeebled state of the nervous and muscular systems. It is possible, by these symptoms alone, to decide, in many cases, whether gangrene is present, and whether it is progressing or disappearing.

In some cases the progress of the disease is rapid and terrible. The edges of the wound become hardened and everted, the surface of the wound rises up into a pulpy, ragged, grey and greenish mass. When the sloughs are detached the disease attacks other adjacent structures from day to day, extending its ravages both in length and breadth, involving aponeuroses, muscles, bloodvessels, nerves, tendons, the periosteum, and bones and joints.

Most commonly after the muscles have been exposed, they continue to be gradually dissected; their connecting membrane is completely destroyed, and they are left, covered with an offensive, greasy looking matter. When a muscle has been invaded by the disease, it sometimes swells to a great size, loses its irritability, and assumes the appearance of a large, purple and greenish coagulum. As the disease advances, haemorrhage from small vessels is a common occurrence, and in the more advanced stages, some of the large vessels give way and the patient is frequently destroyed by the consequent haemorrhage. Colliquative diarrhoea caused by the absorption of the gangrenous matters, is a frequent cause of death.

Microscopical Examination of the Gangrenous Matter : Consists of the various structures in a disorganized state, together with the products of the dead disorganized tissues. The pus globule absent in the gangrenous mass. The appearance of the pus-globule in hospital gangrene a favorable sign. Animalcules present in considerable numbers in the gangrenous matter.

I have made numerous microscopical examinations of the gangrenous matter, and discovered that it consists of various structures in a disorganized state, together with the various products resulting from the altered physical and chemical compounds. Innumerable granules are observable, with detached masses of

fibrous and muscular tissue, broken bloodvessels, disorganizing blood corpuscles, and in some cases, especially when strong mineral acids have not been applied to the gangrenous wound, crystals of the triple phosphate. Animalecules of simple organization and endowed with active rotary motions, abound in hospital gangrene. After a careful examination of various vegetable and animal matters exposed to the atmosphere, under similar circumstances of temperature and moisture, I have come to the conclusion, that in the present state of our knowledge we are unable to demonstrate that these animalecules are in any way connected with the origin and spread of hospital gangrene. The gangrenous matter appears to afford a nidus in which these simple forms of animal, and even of vegetable life are rapidly generated and multiplied. As far as my observations extend, they show that these animalecules will be generated with similar rapidity in urine containing albumen, or in any nitrogenized body undergoing putrefaction, in a warm, moist situation, like that of the wards of a hospital. The warmth of the human body, also without doubt, affords a most favorable condition for the rapid development of the simple forms of animal life. I have been unable to discover any forms of animalecule peculiar to hospital gangrene.

With reference to the simpler forms of vegetation, they are also present, but in less abundance than those of animal life; and in like manner these vegetable organisms are not peculiar to hospital gangrene, but are found in all organic matter undergoing decomposition under similar circumstances.

I have been unable to establish any relation between the rapidity of the spread of the disease, and the number and character of the living organisms; and have even found them absent in the most extensive gangrene, which had been excluded by the sound skin from the atmosphere. These microscopical investigations, therefore, have thus far afforded only negative testimony upon the animalcular origin of hospital gangrene.

I have determined, by careful microscopical examination, that the pus-globule is not formed in true gangrenous matter. We do not wish to be understood as asserting that pus is never present in a gangrenous wound. It frequently happens that gan-

grene may exist in certain portions of a wound, whilst in other parts the reparative process is active. So also portions of the structures may resist for a time complete death, and whilst passing into a state of gangrene, present some of the changes of inflammation, one of which may be an altered or imperfectly developed pus. In the healthier portions of a gangrenous wound, we may therefore have the formation of pus, whilst in the gangrenous mass, this evidence of the organizing force is absent, or only accidentally present.

After gangrene has set in, the reappearance of pus should be regarded as a favorable sign, indicating an attempt at organization, and an improvement in the plastic powers of the parts immediately surrounding the altered gangrenous matter.

In the local manifestation of the actions of many organic poisons, of sibbens or sivens, of jaws and of various skin diseases the formation of pus is invariably observed. Even in the phagedenic ulcers arising from the abuse of mercury in constitutions worn down by vicious habits, deteriorated by the abuse of alcoholic stimulants and bad diet, and poisoned by the syphilitic virus, the spread of ulcerations and the detachment of the tissues is attended with the constant formation of pus. Whether we view this fluid, as resulting from the degeneration of the affected fluids and tissues in these diseases; or as analogous to a secretion thrown out by the parts surrounding the immediate focus of the inflammation, destined to dissolve the diseased tissues; or as one of the natural stages of the changes of coagulable lymph, and of granulation cells, in the progress of inflammation: it is nevertheless true, that the absence of pus in any wound or ulcer which is rapidly enlarging its bounds, indicates marked derangements in the changes of the solids and fluids, and in the action of the forces concerned in ordinary inflammation. Whilst inflammation is justly called a diseased action, and is incessantly attended with derangements in the constitution and forces of the affected parts, and in the processes of nutrition and secretion; at the same time, inflammation is governed by definite laws, and often progresses in such a manner, as to preserve the life of an animal, and the functions of the part inflamed; therefore uniform perturbations of the process as ordinarily observed, indicate clearly the action

of some definite cause. And hence also we may speak of a derangement of even the changes characteristic of inflammation.

If we accept the definition that inflammation is "an alteration in the healthy structure and function of a part, accompanied by a perverted condition of the blood and capillary blood vessels; ordinarily attended with redness, heat and swelling; and inducing more or less febrile disturbance in the general system;" then in hospital gangrene we observe all the essential conditions of inflammation. In this disease, there is an alteration in the healthy structure and function of the affected parts, as indicated by the change of color and structure, the foetid odor, and the suspension of secretion and healthy nutrition; there is an altered condition of the blood as manifested by the dark, livid areola, by passive haemorrhages, and by the dusky hue of the complexion; there is derangement of the capillary circulation, as manifested in the effusion in and around the gangrenous tissues and the intense congestion of the blood-vessels in immediate contact with the diseased parts; there is redness, pain, heat and swelling; and there is more or less febrile disturbance of the general system, as manifested in the rapid feeble pulse, the marked diurnal elevations and depressions of temperature, the depressed spirits and deranged muscular and nervous actions.

When the injury of the living tissues is simple, as in the wound caused by a mechanical instrument, the natural result of inflammation appears to be the production of such a fibrinous effusion as will surround and isolate the injured or diseased parts. In such uncomplicated cases of the inflammatory process, there will be observed in the injured structures, the perversion of nutrition, the destruction of capillaries, the alteration of the blood, the exudation of lymph and the formation of pus; and around the focus of actual destructive changes, the blood-vessels are distended with blood and exude the plastic lymph, from which the coagulable elements separate, containing the germ cells, destined not merely to form a structure inclosing the diseased parts, but also by their development to form a tissue which will replace that which has been destroyed. The living cells of the lymph may either form tissue, or granulations, or they may be arrested and altered in their development and form the pus globule. With regard to

the vital properties of coagulable lymph, its essential character, is its power to develop itself and assume organic structure. We should regard pus, on the one hand, as a secretion destined to dissolve certain organic tissues, and to shield by its bland properties delicate granulating surfaces from the direct action of the atmosphere; and on the other hand as a rudimental imperfectly developed, or degenerated substance, essentially similar to the materials of the lymph of inflammatory exudation, or of granulations, but which has either failed of being developed like them, or which has degenerated after a certain amount of development.

In hospital gangrene, the lymph effused around the focus of disease, possesses the power of coagulation, as in other varieties of inflammation, as I have determined by actual experiment; and there appears to be all the conditions necessary for the arrest of the disease by the development of coagulable lymph through nucleated cells into the fibrous and fibro-cellular or connective tissue; but the characters of the irritant poison are such, that the products of inflammation, together with the blood-vessels and the blood itself are rapidly disintegrated. The life of the blood is destroyed by the gangrenous poison, and the fluids and living organizable matter and cells, upon which the progress of inflammation depends are poisoned. It results from this, that the liquor-sanguinis effused within the diseased structures does not pass into the state of pus, as in healthy wounds, and in the common furuncle and carbuncle, or even in erysipelas and the pustules of small pox, and the exudation corpuscles are so poisoned and disorganized that they are not further changed in either a progressive or descending series, and wherever the limiting fibrinous wall is thrown out with its cellular elements, it is in like manner destroyed whenever it is reached by the poison. All the changes of the blood characteristic of ordinary inflammation may be present around the gangrenous parts; as the increase of liquor-sanguinis, with increase of its albumen and fibrin, both actually and relatively to the blood corpuscles, aggregation of the red corpuscles, and increase of the colorless or lymph corpuscles, but no arrest of the disease will take place, as long as the poison is capable of exciting rapid chemical change and decomposition, after the manner of a nitrogenized ferment in the products of inflammation.

If in a wound infected with hospital gangrene, the morbid process did not advance, as in any other wound, from the centre to the circumference, with the central focus of infection and active disorganization surrounded and guarded as it were by a circle of active congestion, with blood-vessels loaded with colored corpuscles, with interrupted circulation and exudation of plastic liquor-sanguinis, and with venous and lymphatic absorption greatly impeded, if not altogether arrested ; the gangrenous poison would enter directly and rapidly into the circulation and prove rapidly fatal. And even after the excitation of inflammation, in virtue of the irritant properties of the poison, in every case of hospital gangrene of any standing, more or less of the poison is absorbed and effects the general system. The extent of this absorption of the deleterious agent or agents, will depend upon many circumstances, but chiefly upon the character and extent of the inflammatory process around the immediate centre of infection.

We may in these facts find some explanation of the relief sometimes afforded by haemorrhage in hospital gangrene. The poison is diluted and washed out by the blood, at the same time that the inflammatory congestion is relieved by the haemorrhage.

From the disintegration of the organic constituents of the structures in hospital gangrene, a number of compounds result, which are either unknown, or are very rare in the living organism. Some of these products when absorbed, act as animal poisons upon the muscular and nervous systems, and tend to disorganize the blood and derange the actions of the alimentary canal. When absorbed in large quantities, these products sometimes act as irritants to the intestinal canal, and the patients are sometimes destroyed by the diarrhoea consequent upon their action.

The extent of these changes is well illustrated by the fact which I have demonstrated by microscopical and chemical investigation, that ammonia is sometimes generated in such large quantities in gangrenous muscles, as not only to give a strong alkaline reaction to the naturally acid muscular juices, but also to cause the precipitation of the phosphates in the form of well-defined crystals of triple phosphate.

The results of these microscopical observations, clearly sustain

the view; that hospital gangrene is due to the action of an irritant organic poison, which, after the manner of a ferment, is capable of inducing such decomposition in the tissues and in the blood, that all developments of the cellular elements of the liquor-sanguinis into cells, fibres or into pus, is arrested.

CHANGES OF THE BLOOD IN HOSPITAL GANGRENE.

In this disease, it would be manifestly improper to abstract blood by venesection simply for analysis, when the lanceet wound would be liable to be attacked by gangrenous inflammation and the life of the patient might be sacrificed. This danger was specially to be dreaded in the crowded Confederate hospitals, scantily supplied with lint, rags, utensils and instruments. My investigations, therefore, have been necessarily limited to the examination of the blood collected during haemorrhages and amputations.

The first and most important subject of investigation, in the relations of the changes of the blood in this disease, which we endeavored to elucidate, was the character and quantity of the fibrin. The determinations of the variations of the fibrin, appeared to be of the first importance, because of the relations which the quantitative and qualitative changes of this constituent of the blood bear to the phenomena of the two great classes of disease—the phlegmasiae and the pyrexiae. We have drawn up the following table of the proportions of fibrin in various diseases, that we may be able, as far as this constituent of the blood is concerned, to determine whether hospital gangrene should be classed with the phlegmasiae.

TABLE of the Fibrin in 1000 Parts of Healthy and Diseased Blood:

Observers.	Diseases.	Remarks.	Fibrin In 1000 Parts Blood
Andral & Gavarret	Standard of Health	{ In Healthy Blood the Fibrin may vary from	2.00 to
Becquerel & Rodier	Hospital Gangrene	Mean of five cases.	3.50
Joseph Jones	" " "	Maximum.	3.86
" " "	" " "	Minimum.	6.3
" " "	" " "	First Case	2.10
" " "	" " "	Second "	4.02
" " "	" " "	Third "	6.03
" " "	" " "	Fourth "	2.10
" " "	" " "	Fifth "	3.04
Becquerel & Rodier	Phlegmasia Generally	Mean of Numerous Obs.	4.11
" " "	Pneumonia	" First Bleeding	5.80
Andral & Gavarret	" " "	" Second "	7.30
" " "	" " "	Mean of 58 Analyses	7.30
" " "	" " "	Maximum of 58 Analyses	10.50
		Minimum	4.00

Observers.	Diseasas.	Remarks.	Parts in 1000 parts Blood.
Andral & Gavarret.....	Pleuritis.....	Mean	4.65
" "	"	Maximum	5.90
" "	"	Minimum	3.60
Becquerel & Rodier.....	Acute Bronchitis.....	Mean of five Cases.....	6.10
" "	"	Mean of four Cases.....	4.80
Andral & Gavarret.....	"	Maximum of Six Cases.....	9.39
" "	"	Mean of "	5.70
" "	Angina Tonsillaris.....	Mean of "	5.55
" "	"	Maximum of "	7.20
" "	"	Minimum of "	3.80
" "	Acute Rheumatism.....	Mean of 43 Cases.....	6.70
" "	"	Maximum of 43 Cases.....	10.20
" "	"	Minimum of "	2.80
Becquerel & Rodier.....	Chronic Rheumatism.....	Mean of ten Cases.....	3.80
" "	Articular Rheumatism.....	Mean	5.80
Heller.....	Puerperal Fever.....	Mean of four Cases.....	6.76
Popp.....	Febril Arthritic Rheumatism.....	Female aged 20, 1st bl'dng	5.16
" "	"	" " 2d	11.89
" "	"	Male aged 22, 1st bleeding	12.97
" "	"	" " 2d	11.40
" "	"	" " 3d	7.91
" "	Glanders.....	Female, aged 20	9.25
" "	" .....	.....	13.34
" "	Infiammation of Brain.....	.....	6.37
" "	Erysipelas.....	Man, aged 33 years	10.48
Andral & Gavarret.....	"	Mean of eight Analyses	6.49
" "	"	Maximum of 8 "	6.30
" "	"	Minimum of 8 "	5.67
" "	Phthisis.....	Mean of twenty-one Cases	7.30
" "	"	Maximum of 21 "	4.40
" "	"	Minimum of 21 "	3.60
Becquerel & Rodier.....	Scrofula.....	Mean of sixteen "	5.90
Glover.....	Carcinoma.....	Mean of 8 Cases, Males	4.80
Heller.....	"	Mean of seven Cases	3.13
" "	Cholera.....	Maximum of seven Cases	6.58
Wittstock.....	"	Minimum of "	16.44
Smith.....	"	One Case	3.30
Becquerel & Rodier.....	Bright's Disease, Acute.....	.....	11.00
" "	"	Man, day of Death	11.00
" "	Chlorosis.....	Mean of 15 Cases	1.88
" "	"	Mean of 13 "	6.50
" "	Anæmia.....	Mean of 6 "	4.34
" "	Diabetes Mellitus.....	Mean of 10 "	4.20
Joseph Jones.....	Acute Scurvy.....	Mean of 28 "	3.72
Becquerel & Rodier.....	Chronic Scurvy.....	Man aged 48, sick 42 days	2.50
" "	"	" 21, " 30 "	2.20
" "	Small Pox.....	" 32, " 455 "	1.85
" "	"	" 23, " 552 "	1.32
Andral & Gavarret.....	Scarlatina.....	Mean of five Cases	2.40
" "	"	Maximum of five Cases	4.40
" "	Measels.....	Mean of four Cases	1.10
Joseph Jones.....	Malarial Fever.....	Mean of seven "	4.35
" "	"	Mean of nine "	2.74
" "	"	Maximum of nine Cases	2.01
" "	"	Minimum of "	2.93
" "	"	Mean of "	0.87
" "	"	Int'r'm't fever of 12 days	1.90
" "	"	" " 2 weeks	2.54
" "	"	" " 6 weeks	1.92
" "	"	Remittent fever of 16 days	2.93
" "	"	" " of 10 "	1.43
" "	"	Remit. & Typhoid 11 "	2.38
" "	"	Remittent fever 2 weeks	2.71
" "	"	Congestive Fever	0.87
" "	"	Congestive fever	1.45
Andral & Gavarret.....	Typhoid Fever.....	Mean of 41 Analyses	2.60
" "	"	Maximum of 41 Analyses	4.20
M.H. Guenard, DeMussey and M. Rodier.....	Typhus Fever.....	Minimum of "	0.90
" "	"	Mean of six Cases	2.48
" "	"	Maximum of six Cases	3.90
" "	"	Minimum	1.20

The first case of hospital gangrene, in which we examined the blood, was of the gravest character: the diseased action involved a large portion of the arm and fore-arm, and the elbow-joint was opened by the extensive ravages of the gangrene. The case terminated fatally after slight haemorrhage from the brachial artery.

The action of the gangrenous poison upon the general system; the feeble rapid action of the heart; the great changes of temperature; the depressed, enfeebled, nervous and muscular forces; the trembling hands; the low, muttering delirium; the trembling eye-balls and quivering features; the insensibility of the organs of sense; the derangement of digestion, and the fetid diarrhoea; the dusky, sallow hue of the complexion, and the livid, blue color of the tongue, were manifestly due to derangements induced by the gaugrenous poison in the constitution of the blood, in the capillary circulation, and in the processes of nutrition, secretion and excretion. The blood appeared to have lost, in a great measure, its power of absorbing oxygen; and were the process of analysis sufficiently exact, and comprehensive, it might have been possible to have detected the gangrenous poison, or the products of its action in the blood. The intestinal canal appeared also to eliminate considerable quantities of the offending matter from the blood.

In this case the fibrin was slightly increased above the standard of health, being 4.02 parts in one thousand parts of blood, whilst in healthy blood, the fibrin may vary from 2. to 3.5 in the thousand parts. It was below the standard observed in the phlegmasiae generally. Thus, according to Andral and Gavarret, the mean of 58 analyses of the blood of pneumonia, gave 7.3 parts of fibrin, with a minimum of 4. and a maximum of 10.5; in pleuritis, mean of 5 analyses 6.1; and according to Becquerel and Rodier, the standard for the phlegmasiae generally, as determined by numerous observations, is 5.8.

In this case the fibrin was increased above the standard usual in idiopathic fevers. Thus, in nine cases of malarial fever, I found the fibrin to range from 0.877 to 2.938, with a mean in the thousand parts of blood of 2.018; in marsh cachexy, induced by the malarial poison, Becquerel and Rodier found, in five cases, the fibrin to range from 2.26 to 4.27, with a mean of 3.49; Andral and

Gavarret, in 41 analyses of the blood in typhoid fever, give the minimum of the fibrin as 0.9, the maximum 4.2, and the mean 2.6; in typhus fever, according to M. H. Guenard de Mussey and M. Rodier, maximum 3.9, mean 2.446, and minimum 1.2.

The fibrin was increased above the standard for small-pox, as determined by Andral and Gavarret: mean of blood of five cases of small-pox, 2.4, maximum 4.4, minimum 1.1. It was less than that of scarlatina, according to the same observers: mean of four cases, 4.35, maximum 6.8, minimum, 3.1. It was somewhat greater than that of measles: mean of seven cases of measles (Andral and Gavarret) 2.742, minimum 2.4, maximum 8.4.

It is also important to note that this constituent of the blood was in larger amount than in acute or chronic scurvy: thus, according to Becquerel and Rodier, the fibrin in one thousand parts of the blood of a man, aged 48 years, sick with scurvy forty-two days, was 2.5; in a man aged 21 years, sick thirty days, was 2.2; in a man aged 22 years, sick 445 days, 1.85; in a man aged 23 years, sick 553 days, 1.32.

As far as my observations have extended, there is no necessary connection between hospital gangrene and scurvy. The two diseases may exist together, and hospital gangrene appears to commit most frightful ravages in scorbutic patients, but they are not related to each other as cause and effect. This observation is still farther sustained by the fact that the remedies best adapted for the cure of scurvy, exert little or no effect upon the progress of hospital gangrene; and I have seen hundreds of cases arising in men in whom no sign of scurvy was present. When the two diseases exist in the same individual it is undoubtedly true, that it is difficult to eradicate and cure the hospital gangrene, until the scurvy has been removed by a proper course of treatment and diet; but this fact does not at all establish any identity, or even relationship, between the two diseases.

It is also worthy of consideration, that the fibrin was increased to a much less extent than is usual in erysipelas: thus, Popp found this constituent to exist in the blood of a man suffering from erysipelas, in as large a proportion as 6.6; and Andral and Gavarret in eight analyses of the blood in this disease, determined the mean to be 5.67, minimum, 3.6, maximum 7.3. Some have supposed

that hospital gangrene was intimately related to erysipelas, this fact, however, together with the absence of pus in the former, and the rapid and almost invariable and abundant formation of this result of the inflammatory process in the latter, demonstrates that the two diseases are distinct.

Finally, the results of the examination of the blood in this case, sustain the view that the essential conditions of inflammation are present in hospital gangrene.

In the second case the fibrin amounted to 6.03 parts in the thousand of blood.

This soldier after suffering with gangrene in a gun-shot wound of the neck, which extensively denuded the muscles on the left side above the scapula, was suddenly seized with a slight haemorrhage from the internal jugular vein, which was followed by such complete prostration of the muscular and nervous forces, and such loss of power and variation in the action of the heart, that the gravity of the symptoms could only be accounted for on the supposition that air had entered the venous system.

The patient, who was sitting up at the time of the occurrence of the haemorrhage, was immediately seized with great difficulty of breathing, loss of muscular power, irregular, thumping action of the heart, and total cessation of the pulse; although the haemorrhage was very slow, as if issuing from a vein, and insignificant in amount, and promptly arrested upon the application of a solution of per-sulphate of iron, and he lay with eyes fixed, gasping for breath, unable to articulate, with cold purple hands and lips, as if in articulo mortis, and finally died in about eight hours after the haemorrhage.

A careful post-mortem examination revealed the fact, that death had been caused in this case, by the entrance of air into the internal jugular vein, through the erosion caused by the gangrene. Nature had (if we may use the expression) made great efforts to repair, by a fibrinous clot, the ravages of the gangrene, but had not been entirely successful.

The fibrin, although the gangrene was rapidly disappearing, was above the normal standard. It is worthy of notice that the fibrin was more abundant in this case, in which there were little

or no constitutional symptoms, than in the preceding case, when the blood had been evidently altered and poisoned by the virus and its products.

In the third case in which the arm had been amputated from the effect of hospital gangrene, and which was attended with a profuse sanguous foetid discharge from the stump (the case terminating fatally from haemorrhage), the grave constitutional disturbances were attended with a decrease of fibrin below the standard of health, this constituent being only 2.1 parts in the thousand of blood.

In the fourth case in which the structures of the leg were so extensively involved and the strength of the patient so completely drained by the exhausting and unhealthy discharges, as to necessitate amputation at the lower third of the thigh; the fibrin was 3.04 parts, and was within the limits of health, as far as its quantity was concerned. In so extensive an inflammation of the structures of the leg as this patient was laboring under, we should naturally look for an increase of the fibrous element of the blood. We are justified by the whole history of this case, in believing that there was some cause or combination of causes which hindered the increase of fibrin usual in such cases of inflammation. The profuse discharge from the affected limb, as well as the absorption of the products of the disorganized tissues may have had much to do with restraining the increase of the fibrinous element of the blood.

In the fifth case, gangrene committed such extensive ravages in a gun-shot wound of the foot, as to penetrate the ankle-joint and expose the bones and tendons of the leg, and to necessitate amputation below the knee-joint, on account of the great loss of tissue, the carious constitution of the bones, and the progressive exhaustion of the strength of the patient.

As in the preceding cases, the blood collected during the amputation, coagulated firmly, but the clot changed more slowly and less perfectly to the arterial hue upon the surface, than in the blood of health. The fibrin was 4.11 in the thousand parts, and was increased somewhat above the standard of health, but was below that of the phlegmasiae.

From the preceding observations we conclude—

1. *The action of the poison of hospital gangrene is attended with both local and constitutional symptoms of inflammation.*

Thus within the focus of active change and disintegration, there are alterations in the healthy structure and function of the affected parts, as indicated by the change of color and structure, the fetid odor, and the suspension of secretion and healthy nutrition, by the altered condition of the blood, as manifested in the surrounding dark livid areola, by passive haemorrhages and by the rapid decomposition of this fluid; and around the focus of active disintegration there is active determination of blood, congestion of the capillary blood-vessels, accumulation and stagnation of the colored blood-corpuscles, relative and absolute increase of fibrin, albumen and colorless corpuscles, effusion of coagulable lymph, and redness, heat, swelling and pain. In the general system there is increase of fibrin in the blood, and more or less febrile disturbance, as manifested in the accelerated circulation, increased temperature and deranged muscular and nervous actions.

2. *The changes excited both locally and constitutionally by the gangrenous poison, are such, that the products and phenomena of the disease vary to a certain extent from those of ordinary inflammations.*

Thus in hospital gangrene, the lymph effused around the focus of disease possesses the power of coagulation and development into tissue, and there appears to be all the conditions necessary for the arrest of the disease, by the development of coagulable lymph through nucleated cells, into the fibrous and fibro-cellular or connective tissue; but the characters of the irritant poison are such, that the products of inflammation, together with the blood vessels and the blood itself, are rapidly disintegrated, the life of the blood is destroyed by the gangrenous poison, and the fluids and living organizable matter and cells, upon which the progress of inflammation depends, are poisoned. It results from this, that the liquor-sanguinis effused within the diseased structures, does not pass into the stage of pus as in healthy wounds and in the common furuncle and carbuncle, or even in erysipelas and the pustules of small pox; and the exudation corpuscles are so poisoned and disorganized, that they are not farther changed either in a progressive or descending series, and wherever the

limiting fibrous wall is thrown out, with its organizable cell elements, it is in like manner destroyed when it is reached by the poison. All the changes of the blood characteristic of ordinary inflammation may be present around the gangrenous part; as the liquor sanguinis, with increase of its albumen and fibrin, both actually and relatively to the blood corpuscles, aggregation of the red corpuscles, and increase of the colorless and lymph corpuscles; but no arrest of the disease will take place, as long as the poison is capable of exciting rapid change and decomposition, after the manner of a nitrogenized ferment, in the products of inflammation.

3d. The gangrenous poison, as well as the compounds resulting from the disintegration which it induces in the organic constituents of the structures, when absorbed, acts as a poison upon the muscular and nervous systems, and tends to disorganize the blood and derange the actions of the alimentary canal.

When absorbed in large quantities these products frequently act as irritants to the intestinal canal, by which they are eliminated, and patients are sometimes destroyed by the diarrhoea consequent upon this action upon the intestinal mucous membrane. The absorption and consequent action of the gangrenous poison upon the general system, is manifested by the feeble rapid action of the heart; the marked elevations and depressions of temperature; the depressed enfeebled nervous and muscular forces, the trembling hands, the low muttering delirium; the trembling eyeballs and quivering features, and the insensibility of the organs of sense, and by the derangement of digestion and the foetid diarrhoea.

The derangements induced by the gangrenous poison in the constituents of the blood, and in the capillary circulation are manifested by the dusky, sallow, livid and leaden hue of the complexion, the livid blue color of the tongue, the derangements of nutrition, secretion and excretion, diminution in the power of the colored corpuscles to absorb oxygen from the atmosphere, and by the partial increase of the fibrin, notwithstanding the presence of an inflammatory state. It appears therefore, that the fibrin is not increased in hospital gangrene, to the extent usual in ordinary inflammations, on account of the absorption and action of the poison producing the disease, and of the products of the

decompositions which it excites in the structures and fluids. A similar condition is observed in the action of the poison producing small-pox. In this disease also, as will be seen from the preceding table, notwithstanding the presence of both local and constitutional symptoms of inflammation, the fibrin is less than in complicated inflammations, or in pneumonia.

(Concluded next Number.)



ART. III.—*The Principles Regulating the Natural Evacuation of Abscesses*: By SAM'L LOGAN, M. D., Professor of Surgery New Orleans School of Medicine, late Prof. Anatomy Medical College of Virginia, etc.

WITHOUT a careful examination of the facts, nothing seems more beautifully made out than the theory of the natural processes involved in the elimination of collections of pus from the living body. This theory is so familiar to our readers, that I need not describe it in detail. It is embodied in the proposition or *law* that the collection progresses in the direction where there is least resistance, and ultimately ulcerates its way through to the surface, which had been previously strangulated by the pressure of the abscess against the bloodvessels which supply it. But does this theory explain all the cases in which abscesses work their way to surfaces? It does not. Many cases occur where the collection passes in a direction in which the anatomical constituents indisputably present much more resistance than over many other portions of the periphery of the abscess. As instances in point, I may cite the frequent passage of such collections directly through the toughest layers of strong and inelastic fascial expansions, instead of dissecting their way up or down the limb, along the muscular intervals, or between the bones. These glaring violations of the alleged law have long since caused me to doubt its validity, and to seek some more comprehensive generalization by which the phenomena may be more rationally explained. I believe I have succeeded in finding one. Let it be understood, however, that I do not undertake to deny the existence of the

influences heretofore recognized as those by which these purulent collections are brought to the surface. I intend only to affirm that there is a more potent law which controls those influences, and sometimes even directly and successfully oppose them. I claim that there is a higher generalization by which the phenomena can be more rationally explained.

The law I would announce may be couched in the following terms: *Abscesses, as a rule, must move in the same direction as the arterial blood current which mainly supplies their periphery and their so called pyogenic membrane.* How this law works will be best explained by supposing a case of circumscribed abscess, and giving my views of the manner in which it progresses towards its spontaneous evacuation. Suppose an acute circumscribed abscess located just under the plantar fascia, a deep "stone bruise," as it is vulgarly called. As such an abscess increases in size, it would tend, were its progress mainly dependent upon the degree of resistance met with at different points of its periphery, to move in almost any other direction than to the surface of the sole of the foot. But do we not often find such collections slowly and painfully working their way through the tough plantar fascia to this surface? How can this happen? The arterial branches which supply the periphery of such an abscess come from the two plantars. These lie deeper down than the abscess, and the branches which supply the periphery and walls of the collection pass consequently towards its deeper side. The result is, that on that side of the abscess the blood is carried by the finer arterioles uninterruptedly to the parts in that vicinity, and the radicles of the returning veins are subjected to pressure only at their termination. The result is, that the tissues on that side have their circulation comparatively intact even up to the plastic wall of the abscess itself. The nutrition of these parts is therefore but little disturbed, and we accordingly find that the wall of the abscess on that side is often seen to be decidedly thicker than on the side towards which the collection is moving; or, to express it in other terms, the nutrition of the parts on the *cardiac* is necessarily less disturbed than that of the parts on the *distal* side. The difference in the thickness of the plastic wall is the necessary result of this fact. But what is it that so materially interferes

with the nutrition of the parts on the distal side? Most of the arteries which nourish that side *pass round the abscess, and the veins in returning are in like manner diverted from their natural course.* Both these vessels are therefore subjected to the lateral pressure of the abscess, the arteries, even before they have broken into their smaller branches, and the veins after their radicles have united into trunks. This condition of affairs necessarily leads to a most serious disturbance of the circulation, and a corresponding derangement of the nutrition of the distal parts. The arterial coats presenting greater resistance than the veins, whose walls are collapsed more readily, more blood is carried to the part by the former than can be readily returned by the latter; and thus we have a tendency to the characteristic congestive form of inflammation usually seen in such cases when the collection gets near the surface. The same causes exist when the abscess is too deep for inspection, and we are therefore authorized in presuming that this form of hyperæmia or congestive inflammation precedes the abscess from the commencement of its progress. The œdema caused by the congestion further impairs the vitality of the parts: these become sodden, melt down, and are absorbed or slough off; and in this way even the toughest layers of fascia are made to yield, if they lie over the distal wall of the abscess. But it sometimes happens that, propelled at first by these causes, the abscess comes in time to the immediate proximity of a layer of tissue whose vascular supply is derived from arteries flowing in an opposite direction. These vessels and their minute venules not being cut off in the rear—so to express it—carry a comparatively uninterrupted supply of blood directly to the tissues opposing the abscess; their corresponding veins and venules, being but little interfered with, return the blood, and the circulation and nutrition of these tissues are, it may be, even more active than those on the other side of the abscess. The abscess is now arrested, and a conflict ensues, with a change in the after direction of the purulent collection. The result is, that the abscess takes a new direction latterly, this being again regulated by the preponderating direction of the arterial supply to the [remaining portion of the periphery of the same. As an illustration of this conflict between two arterial currents, I may instance the remark-

able manner in which certain structures protect themselves from destructive progress of purulent collections. For example, the larger veins and arteries nourished by their own *vasa vasorum*, will turn aside the advancing abscess; the muscular tissue, protected as by a shield, in virtue of its liberal supply of vessels, will most successfully avert the threatened danger; while on the other hand the hard unyielding bone too easily yields to the pressure of an abscess resting on its surface, for the circulation of its outer layers comes from the direction of the periosteum, the arterial current thus coinciding with the progress of the abscess, and therefore being the more readily cut off. Observe, too, in this last example, how the eroding process is more or less arrested as it approaches the interior of the bone. Here we find another arterial current coming from the opposite direction, *i. e.*, from the medullary vessels, and usually the progress of the abscess is here arrested. The same principles will be frequently found to apply to the elucidation of the so-called pressural effects of tumors. Take, for example, the case of an aortic aneurism resting against the spinal column, and excavating a bed for itself in the bodies of one or more vertebrae. If pressure alone can account for the absorption of the boney tissue in such a case, the *softer* of the two opposing surfaces should be the one to yield. But the bone and not the tumor becomes indented. The blood-vessels supplying the outer layers of bone are cut off by the pressure of the tumor against the periosteum through which they pass, and the loss of nutritive activity in the bone is the result and the absorption follows. But this absorption is seldom if ever allowed to progress beyond a certain depth, and that limit is reached as soon as the tumor reaches the strata of bone whose nutrition depends on the liberal supply of blood furnished by the branches of the thecal vessels coming from the *opposite direction* as they do. Even in the oldest aneurisms we never find the whole thickness of the vertebrae destroyed. I have never seen or read of such a case. In fact, the application of this principle to all the [clinical facts susceptible of explanation by it would take more space and time than is at present at my command, and I leave to the reader the further consideration of the subject in its suggestive details.

ART. IV.—*Hypodermic Medication*: By S. F. STARLEY, M. D.,
Fairfield, Texas.

THE subject of Hypodermic Medication is one that has recently attracted much attention from that portion of the medical profession who endeavor to make their practice conform to the progressive stage of medical science; and few subjects now engaging the thoughts of investigators are likely to yield results more important to the practitioner of the healing art. Especially is this the case with regard to diseases of malarious origin, and of dangerous type.—Such as pernicious intermittent, and congestive bilious fevers, where the stomach is too irritable to retain quinine, or from its diseased state will not readily absorb the remedy, so as to convey it into the circulation.

In such cases, the hypodermic syringe affords us a ready means of introducing the anti-periodic into the cellular tissue, from whence it readily filters through the thin walls of the capillaries and is swept at once into the blood currents, and commences its work of neutralizing and destroying the malarial poison.—The deadly enemy, that has entered the circulation and taken possession of the citadel of life.

Given in this way, our remedy is subjected to none of the accidents that might interfere with its action if given by the mouth—such as loss of the dose by vomiting, injurious chemical actions that might readily take place in a disordered stomach, slowness of absorption, etc. But we know that the entire dose given in this way, will take effect, and that a much smaller quantity is required to produce a given effect, than if administered in stomachic doses. From my own observations, I am inclined to think that the difference in dose should not be so great as is stated by some writers; but I am fully convinced that one grain of quinine, given hypodermically, is fully equal to thrice that quantity given by the mouth, and that it has the further advantage of much greater certainty of action—an advantage readily to be appreciated by every intelligent practitioner, who has had much experience in the treatment of the malarious diseases of the South. In no disease with which I am acquainted, are the advantages of this mode of administering quinine more strikingly displayed than in the treatment of malarious haematuria; a congestive form of ma-

lariosus fever, in which the morbid determination falls with such force upon the kidneys as to induce copious and even exhaustive hæmorrhage from these organs. The hæmorrhage recurring with each paroxysm of the fever, and in some cases continuing throughout the whole course of the disease.

In this disease, with which, unfortunately, physicians in this section of country, are becoming but too familiar—the stomach is so irritable, and the billious vomiting so constant that it is almost impossible in many of the cases to get the stomach to retain quinine long enough to affect the system ; and yet, upon the prompt action of this remedy mainly depends the safety of the patient. In neuralgia, especially that form of the malady induced by long exposure to malarial influences, in which the chylopoëtic viscera are always more or less diseased, the administration of morphia by the mouth constipates the bowels, and tends to increase the general derangement of the digestive apparatus. And yet, what conscientious physician would deny this "*Magnum Dei Donum*" to his patient, writhing under the malign inflictions of an excruciating neuralgia ? Here the hypodermic syringe enables us to administer the soothing opiate to our patient, without the disadvantage of inducing constipation or sickness. And here too, it exerts in many cases a positively curative, as well as palliative action.

In sciatica—a most painful malady—there is, perhaps, no other treatment so effective as the hypodermic injection of atropine, from the one sixtieth to the one-fortieth of a grain, at intervals of three or four days. And I have no doubt but that in the course of future investigations, other advantages of this method will be discovered and brought to the notice of the profession. At present it offers a profitable field of research for the earnest inquirer after medical truth, and enough is already known of its positive advantages to make it the duty of every practitioner to bring it to the aid of his patient in suitable cases. One advantage not to be overlooked, is, that it does not interfere with any other remedies that it may be deemed necessary to administer per oram. Hence there need be no waiting for the action of cathartics, as so many are in the habit of doing, before venturing to give quinine. This is no small item in treating malarious diseases that threaten

to overwhelm the system before we can have time to put into practice the so-called preparatory measures of treatment. Here the hypodermic method enables us to secure the full effect of quinine at once, and thus procure its powerful aid in bringing the system into a condition favorable to the action of medicines addressed to the liver, bowels, kidneys, stomach, etc. The preparation of quinine I generally use is a solution containing thirty-two grains of the remedy to the ounce of distilled water, with the addition of ten drops of sulphuric acid to dissolve the quinine. The syringe I use holds half a fluid drachm, so at each puncture I can give two grains of quinine, which I regard as being fully equal to six grains given by the mouth. When a larger dose is required I make two or more punctures, and thus avoid the local irritation that would result from introducing too much of the solution under the skin at one point. For some time I did not observe this precaution, and injected two or more syringes full through the same puncture. This would occasionally be followed by induration or abscess, and in one case, where the patient was excessively anaemic, a small portion of the integument sloughed out around the point of puncture. But nothing of the kind has resulted in my practice since I have adopted the plan of only injecting a single syringeful of the solution at one point.

Of morphine, the best preparation is Magendie's solution, of which a quantity equal to one-eighth of a grain of morphine is a medium dose for an adult. And I will here say, that I have never ventured to give morphine in this way to children. I think it would be dangerous, owing to their extreme susceptibility to the action of opiates.

I may conclude this paper by stating [that I have used quinine hypodermically some hundreds of times, and with the exception of two or three cases of abscess, which gave little trouble, and the case of sloughing of a small portion of integument, above mentioned, have seen no ill result follow its use. But on the other hand, its effects, when administered in this way, have been so prompt and so permanent, that several persons to whom I have given it now refuse to take the remedy by the mouth at all, and when quinine is prescribed, they insist upon having it injected under the skin.

It may seem to some that this subject is already too well understood to require much further notice in medical journals. But to such I would say, that this method of administering medicine is very far from being generally understood by physicians practising in the country, and it is they who most frequently meet with the most alarming and most fatal attacks of malarious diseases, and need to be armed with every available means of coping with this deadly enemy of our race.



ART. V.—*Case illustrating the Use of the Thermometer in Disease, with Remarks :* By Dr. A. F. HALL, Mobile, Ala.

IT is intended, in reporting this case, to bring to the attention of the Profession, the recent advances made in the medical world of the use or revival of the thermometer as an assistant in diagnosing the extent of the diseased or inflammatory condition with which we may have to deal.

As an assistant, it is a most valuable one, and one that more readily puts a practitioner on his guard as to the extent and real amount of threatened danger, than any agent that we now stand possessed, regardless how cautious and experienced he may be.

In May, 1867, a hale, hearty, laboring man, was admitted into the City hospital, apparently suffering, although so early in the season, from a severe attack of remittent fever. His pulse was about one hundred beats per minute, full, strong, and tense, and under the circumstances, almost demanded venesection, but giving the patient the benefit of a doubt, it was withheld.

The thermometer was applied to the axilla, and in a few minutes indicated a temperature of 102°. It continued at this point steadily during the first day, till evening, and the patient was looked upon as being in a critical, if not a positively dangerous condition. Though the steadiness of the temperature induced the belief in a probably favorable result.

The accomplished English author, Dr. Aitken, who has given to the world a most recherché work on medicine, and on this particular subject has laid down very plain and precise rules, viz.:

"Stability of temperature from morning to evening is a good sign; on the other hand, if the temperature remains stable from evening till morning, it is a sign that the patient is getting, or will get worse. When the temperature begins to fall from the evening to the morning, it is a sure sign of improvement; on the other hand, a rise of the temperature from the evening till the morning, is a sign of his getting worse."

The patient's general condition was highly inflammatory, with a slightly coated tongue, and much thirst. A dose of compound cathartic pills were administered, and produced several large stools. At the same time he was put upon the neutral mixture, in combination with Norwood's tinct. verat. virid., to be given in teaspoonful doses every three hours. From the evening of the first day to the morning of the second day under treatment (and third of his attack) the temperature increased to 105°.

It was then more fully demonstrated by the thermometer that the danger was increasing than could be discerned by the sense of touch or sight. Early on this morning a red patch appeared about the alæ of the nose and spread very rapidly, and in the course of twelve hours the whole face was very much puffed, both eyes were closed, and the whole aspect of the patient was truly pitiable. Delirium then set in, and during the night the patient was wandering in his mind—talking incoherently, and was to a certain extent relieved by a small dose of morphine. During the fourth day there was no increase of temperature above 105°, and was steady from morning to evening, which is considered a good sign by the author above quoted.

But apart from watching the temperature of the body, the inflammation on the head was advancing, and I now had to deal with one of the most insidious and treacherous of diseases—erysipelas of the face and head, and not having much faith in local applications, though generally recommended and accepted by the profession as useful agents, something must be done to arrest the rapid march of the disease, and to give relief to the patient, who was complaining of much pain in the part, calling up one thing and then another, it appeared that none would suit. Finally, it was resolved to apply an ointment of one ounce of mercurial ointment and four scruples of extract of belladonna. This was spread on a piece of old linen rag and applied to the parts, (this was

merely done with a view that the extract would lessen the pain,) and it was exceedingly satisfactory to know that it had the desired effect of relieving the pain and cutting short the inflammation, and its spread in twenty-four hours. The patient passed the night subsequent to the application comfortably and with considerable ease and sleep. The temperature of the body during the first day of the application was a steady decrease from morning to evening. It fell, in all, about 5° , which is not unusual in erysipelas to have very sudden changes or decrease, so says Dr. Aitken, and not be indicative of danger, though it was reasonable to infer that metastisis had taken place.

This appeared to be the turning point, and as the temperature showed but a small increase or rise above 99° for a day or two, and the impression that there was some malarial influence at work was taken advantage of, from the sudden action of the disease, it was determined, notwithstanding, there was still a feverish action going on, to put the patient upon a mixture of iron and quinine in solution, which answered a double purpose of subduing any miasmatic poison, and to give tone to an enfeebled system. The effect was highly satisfactory, the patient making a rapid recovery, without any sequelæ following, as sloughing or fomentation of abscess.

The subsidence of the inflammation may be looked upon as a coincidence rather than an effect. Though it will please be noticed that the effects of belladonna was tried at the time and since upon other patients similarly affected, with like results of cutting short erysipelatous inflammation in a short time.

It will be observed also, that the patient had recurrences of erysipelatous attacks, or a lingering disposition of the first, which were relieved by the exhibition of small doses of blue mass, and quinine in combination.

The pulse of the patient was at all times in accordance with the temperature of the body, increasing and decreasing with it pari-passu.

Temperature	103	Pulse	100
"	105	"	125
"	100	"	95
"	99	"	85

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ART. VI.—*Idiopathic Priapism, with a Case:* By Jos. R. SMITH,
M. D., Elyton, Alabama.

THIS morbid affection, being one of frequent occurrence after the age of forty-five and but seldom adverted to in any of the medical journals of the day, is the excuse for offering the following case to the public.

When we say this singular affection is of frequent occurrence we have reference to that form of the disease which we know from careful investigation, annoys one out of every five men, over forty-five years of age, during the latter part of the night, while the sleep is not sound.

This kind of priapism seems to be entirely under the control of the will, when the patient is awake, except in rare instances; then we have known it to be necessary that the patient assume the erect posture, before relief could be obtained.

These cases of priapism rarely or never come to the knowledge of the physician, from the fact, that a false modesty prevents the individual from speaking of an infirmity that is so easily overcome, as a general thing, by the will, or the assuming of such a position as will favor the free and rapid flow of blood from the corpora cavernosa penis.

These kinds of nocturnal priapisms are attributable to a morbid sensitiveness of the prostatic portion of the urethra, and annoy those persons most who have been the subjects of gonorrhœa, in their younger days.

This latter disease almost invariably leaves, in subjects over thirty-five years of age, a morbid sensitiveness of the neck of the bladder which greatly favors the rapid flow of blood to the penis, during the hours of sleep; particularly after the bladder begins to distend with urine.

The bladder, it would seem, refuses to tolerate more than a certain quantity of urine, before the latter excretion begins to exert its peculiar specific effect on this sensitive portion of the urethra, and by a kind of indescribable sympathy, causes a freer flow of blood into the penis than can be returned by the veins; hence a priapism from sympathy, is the result; consequently the subject is awakened, and unless he rises and empties the bladder, sleep no more visits him that night.

This is the kind of priapism that rarely or never comes to the knowledge of the physician, and in our opinion is not amenable to remedies.

CASE.—On September 13th, 1865, was called to see Mr. T. F. M., who I found laboring under a very painful priapism, which had existed at the time of my visit, about eighteen hours. To ascertain the cause, was the next subject of enquiry.

Mr. M. is aged twenty-eight years, has been married five years, rather delicate health, and of a nervous temperament, never had gonorrhœa but once, and that was about seven years ago, had chills and fever six months previous to this time; for the cure of the gonorrhœa may have used caustic injections; never had any symptoms of stricture. About the time he was laboring under gonorrhœa, received a severe fall from a buggy, falling on buttock, which caused the formation of an abscess up the rectum, which discharged through the anus: since then has suffered no inconvenience from the fall; has had several spells of priapism before; the first, about twelve months before this; all of which were relieved by urinating or walking until fatigued. Mr. M. assured me he had had no impure connection which might lead me to believe him laboring under incipient gonorrhœa; in fact has not had connection of any kind for ten days (Mrs. M. being absent), has no erotic desires, nor never has had during his other less obstinate spells of the same disease.

When I saw Mr. M., he had used all the remedies that afforded relief heretofore, with many others that suggested themselves; such as the cold and warm baths; walking until fatigued; a full dose of epsom salts, which had acted freely; can now void his urine in a full stream without pain, but requires considerable effort; feels quite well, except a slight pain just behind the corona-glandis. This, (as in all previous attacks) came on in the night and while asleep, from supposed neglect to empty the bladder when lying down; has been drinking spirits pretty freely lately, but not more so than frequently before; does not remember that such indulgences invariably cause the priapism; contracting the sphincter ani or pressing down the penis causes great pain; pulse natural.

PREScription.—Assume the erect posture, and smoke tobacco continuously until thoroughly nauseated; at the same time direct a continuous stream of cold water on the penis, from glands to pubes; and as we had frequently relieved symptomatic priapism by the application of cold to the feet, we suffered in this case the cold water, as it ran from the penis, to fall on the floor and run under the patient's feet. This was persisted in for half an hour without the least avail, notwithstanding the cold perspiration streamed from the face of the patient, from the excessive nausea produced by the tobacco smoke. The skin on the penis from the pouring of the cold water, became shriveled; the glands assumed a livid appearance. I then put him on minute doses of tart. emet., to be continued every half hour until fully nauseated, and at the same time, directed him to fill the rectum with cold water, also throw a stream of cold water into the urethra, and when lying, keep the organ enveloped in cold cloths, and left him for the night.

Sept. 14th. Found patient just as I left him; he informs me that he scrupulously carried out the prescriptions of the previous day. That the tartar emetic after a prolonged nausea produced full emesis and catharsis. I now advised a consultation, and Dr. Deason, my former pupil and partner was called in. We bled Mr. M. in the erect posture, until approaching syncope; after slight reaction, he was again caused to assume the erect posture with a stream of cold water poured on the organ, until we were compelled to lay him down for fear of fainting. There not being the slightest change in the erection, he was now put fully under the influence of chloroform, and notwithstanding he had several surgeons' certificates of hypertrophy of the heart, he bore the chloroform well and remained fully under its influence for more than half an hour, sleeping quietly and soundly. While getting under the influence of the chloroform, he felt as though the relief would be permanent, as all pain seemed to subside; but on awaking, the pain and priapism were just as before its administration—the pain in the penis, if possible, more excruciating. We now covered the entire perineum with a plaster of extract of belladonna, and gave one-fourth of a grain of morphia. We also caused the whole genital organs to be covered with a warm bran poultice.

Sept. 15th. The morphia produced perfect quietude, had a fine night's sleep; free from pain except slight soreness on moving the penis down, prostate glands somewhat softened, no change whatever in the priapism. He now has great difficulty in urinating, and what is passed is accomplished by introducing the finger in the rectum and pressing upward and forward the prostatic portion of the urethra. I again bled him freely (approaching syncope) for the pulse was now full and strong; also enveloped the penis and entire perineum in a plaster of the extract of belladonna, to remain six hours, and take a steam bath; continue the morphia in quarter grain doses, alternately with two grains gum camphor every two hours during the night, the morphia to be suspended so soon as quiet was produced.

Sept. 16th. Slept well all night; passed urine freely; little or no pain; soreness slight, priapism as complete as on the first day. Spirits much better; good appetite; as the bowels have not acted since he took the tartar emetic, he was now ordered a full dose of Epsom salts and morphine, at bed-time; remain quiet in bed with cold cloths to the penis, in fact the latter remedy was almost continuously used.

Sept. 17th. Salts acted freely; slept well; no change in the priapism; experienced no inconvenience from the camphor, which I neglected to say had been continued for the last twenty-four hours, every two hours, in two grain doses, and was prescribed for to-day.

Sept. 18th. Penis a little more flaccid, may be brought to a right angle with the body without producing much pain. I now prescribed extract of belladonna, one grain every two hours during the night, with a plaster of the same to the perineum.

Sept. 19th. Took the extract of belladonna every two hours until six grains were taken, and perceiving great dryness of mouth with dimness of vision he suspended its use; there is still little or no change in the priapism from yesterday, in fact, the penis is hardly so flaccid as on yesterday. He was now ordered to take the ext. belladonna in two grain doses every three hours until its specific effects were again produced.

Sept. 20th. Still cheerful; appetite good; passes urine freely, but no change in priapism, so he reports. I did not see him today, consequently no prescription.

Sept. 22d. No change since last visit. Cold water has been continued almost incessantly. Advised leeches but they could not be procured. Our remedies (and patience too, somewhat) being exhausted, without any change in symptoms, and there seeming to be no risk in the trip, our patient was permitted to return to Huntsville, Ala., in a two-horse wagon, to his family, where, we are informed he arrived safely, without any untoward symptoms. The disease gradually and almost imperceptibly gave way.

Mr. M. died in Memphis, Tenn., shortly after this, but of what disease we are not informed.

It is unfortunate that we were unable to get a full and satisfactory history of this case, after the last date to its termination.

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ART. VII.—*Essay on Malignant Congestive Fever.* Read at a meeting of the Greensboro' Medical Society, on Monday, 6th April, 1868. Published by request of the Society.

*Mr. President and Gentlemen,—*To-night there is a feeling of mistrust, mingled with the pleasure, I experience in appearing before your honorable body as essayest. To me the writing of an essay is no easy task, and the mistrust arises from the great fear of my ability to interest you during the time allotted. My professional harness is as yet so new that experience, from whose garnered store you can all so readily draw, is in its infancy. Its teeming fields have but lately furnished me with material wherewith to interest you. Like the industrious farmer I have but sown my crop, and for the first year my yield is small; nothing daunted, but, on the contrary, encouraged, I have renewed my energies, and now watch with peculiar interest the seed expanding:—"First the blade, then the ear, afterwards the full corn in the ear." To night I bring some of the first fruits to an appreciative market, and sincerely beg your kindest indulgence, promising in return my hearty coöperation in an undertaking that will insure to our sacred and noble profession the high prominence which it so justly deserves, and which your body for its part labors most earnestly to secure.

The subject to which I propose calling your attention, is the same selected by you for debate this evening, and which you have been pleased to call *Cachæmia*. To use your own name has objections: In the absence of one more expressive of the condition under which your patient is suffering it might do, but to my mind it is, on this very account, defective. I have since my first case contended, and do now contend, that the disease in question is the severest form of congestive fever, and the term—malignant congestive fever—has always appeared to me to be most expressive of the morbid condition, and it has been my answer when interrogated, as to the nature of the disease. True, my patrons have insisted most strenuously upon calling it yellow fever—all my assertions to the contrary—and in truth, the patient was always yellow enough, and fever sufficiently high to have so termed it. However, we will be more capable of naming it, when the subject has been freely ventilated, as I hope it may be to-night. It is not necessary or important that I should go into a detail of my cases, I will enumerate the symptoms, and then present to you my treatment and views upon the subject.

Since the first of Sept. last, I have seen many cases of fever, very malignant in form, ushered in by a chill of unusual severity and duration, followed by high fever, skin very hot and dry, tongue moist but heavily coated, with great nausea and vomiting, pain in lumbar regions and hæmorrhage from the kidneys. The vomited matter was fluid and black, and I am at a loss to say what this is owing to, unless to some peculiarity of gases in the stomach. This stage was soon followed by a completely jaundiced condition of the skin, seeming to become so almost in the twinkling of an eye. I have left my patient in the morning with skin as clear as usual, and returned in the evening to find him completely jaundiced; the nurse could tell almost to a minute when it occurred. The pulse was very quiet, with a peculiar movement, differing very much from the pulse of our ordinary fevers. The desire to micturate was very frequent and urgent, and each discharge was reddened with what I took to be blood, the analysis of our specimen, a week or ten days old, has been read you by my friend Prof. N. T. Lupton, Prof. of chemistry, in Southern University. From this analysis, and my own judgment

in regard to the fluid discharged from the bladder, there is not, in my mind the shadow of a doubt as to its being more or less blood. From this enumeration of symptoms you may imagine my feelings when called to my first patient, suffering with this disease. Yet, strange to say, it did not produce the impression upon me that it ought to have done. It did not cause me to think upon the pathology of the disease. In fact, it was something so entirely new, that I considered it as an anomaly, and did not expect to see another case; in a few days I was aroused from this by a similar case, and ever since it has been a painful and interesting study, cases coming in continually, rarely an intermission of two weeks, during the severest of winter. All the summer I had been treating congestive fever, but nothing half so violent. My examinations were carefully and critically made. My first patient being a bright and lovely girl of twelve summers, I tried hard to make the haemorrhage due to an early menstruation, but it would not be. The desire to micturate would come, and with it every time the haemorrhage. It was something so entirely new to me, that my mind sickened at the absence of all principles to guide me, and through fear of speedy exhaustion to my patient, I was a too willing victim to the administration of astringents and stimulants. Of course other remedies were resorted to; calomel was given freely, but not sufficiently from subsequent experience, to make the desired impression. Quinine was likewise given in large quantities, but did not seem to have the accustomed effect upon the system, and then would come the paroxysm, and very likely the patient would die; if he passed through this stage, on the next day the patient would be in a high state of fever; rapid pulse, hot and dry skin; tongue still coated, and now very dry, bowels still obstinately constipated, and the haemorrhage still free and abundant. In vain were all the remedies, calomel, quinine, opium, ipecac, blister, turpentine, mustard, whiskey, and other stimulants tried. This of course had a tendency to cause me to stop and reflect. I did so, but could not upbraid myself. All my works were studiously searched for some light to guide me. I felt satisfied of congestion of the liver and kidneys and a peculiar derangement of all the internal viscera.

The several articles in my medical works, upon congestion of

abdominal viscera, were carefully studied, but all to no purpose. In one case in which I had not used astringents freely, and in the others I noticed a marked suppression of urine after the subsidence of the haemorrhage; in my next case, after mature reflection, I determined to deviate from my former treatment, and reject astringents entirely, and let the haemorrhage alone, for I had arrived at the conclusion that there was a morbid condition of the kidneys which tended to suppression, and by this suppression morbid matters were retained in the blood, which would prove to be of great danger to the nervous centres; and now, in conjunction with other remedies, directed to the abdominal organs, I determined to direct a class of remedies to the renal organs which would break up that condition, and accordingly selected diuretics, which, in my opinion, would relieve the system of the dreadful poisoning by urea. My first patient, I am satisfied, died from the effects of uræmic intoxication. The convulsions were, indeed, fearful. With this view of the pathology of this disease, and the treatment, I think that in a measure I am right, for my subsequent practice confirms me in it.

With the administration of calomel and ipecac, to break up the congestion, I combine a powerful diuretic draught, and have always found it to act well, and prepare the way for the free and rapid use of quinine. Since the introduction of diuretics into my practice, in the treatment of this fever, I have not lost a single patient; and here I venture to claim the credit of originality as to the administration of diuretics in this disease, during the continuance of the haemorrhage, and hope that I do not expose myself to the imputation of presumption. Since our profession owes its existence, in some manner, to contributions from humble sources, I hold that none of its members have a right to withhold anything which experience may shed upon a subject pertaining to the profession.

I am convinced that the stimulating plan of treatment is contra-indicated, and is destructive, except after the malignancy of the disease is subdued, and in the convalescence, which is sure to be very slow: then I give tonics and stimulants to rebuild the shattered constitution.

The *vis rite* is so thoroughly depressed that it needs artificial aid to recuperate. Blisters, in my opinion, are contraindicated, owing to some effect which they are calculated to have upon the kidneys. I have never used blisters in conjunction with the administration of diuretics. I feel satisfied however, that blisters would be decidedly beneficial in breaking up the congestion, provided there was no tendency to effect the urinary secretion. I had hoped to see no more of these cases, but have been surprised to meet with several during the winter, and am of the opinion that the season is favorable to them, tending to lessen the severity of the explosion, for I am satisfied that it is the effect of malaria, with which the system is thoroughly saturated, from long exposure to its influence.

Under this form of treatment, and with appropriate treatment for emergencies, I [have lost some of that timidity with which I once approached a patient suffering, as I am invariably informed, with that "new disease," and my treatment is based upon the thorough study and investigation that I have given the disease, and as my mind is not yet thoroughly satisfied as to the morbid conditions, I hope to have much light thrown upon the subject by your discussion.

The fearful work of destruction, of which the symptoms enumerated are pathognomonic, has been going on within the system for a long, long time, and the constitution being thoroughly saturated with malarial poison, is liable at any time to a violent explosion. Believing then that this fever is of the congestive type, let us trace it to its origin; and in the first place we find that the patient has been subject to all the evil consequences of congestion of the portal circulation, and this in my opinion, preceded by venous inflammation. Here, then, we find venous congestion in its most violent form predisposed by malarial poison, and this through sympathy calls into existence other inflammations and congestions, which join in the disordered work, and we have congestion of the liver, kidneys, stomach, and bowels. The renal congestion, with its attendant feature is the great terror and trouble in such cases.

Here now, gentlemen you may all join issue with me, as I hold that this haemorrhagic effusion is a vital process, and somewhat

analogous to that of secretion, proceeding directly from the capillaries of the kidneys, and is a *salutary effort* of nature to relieve the *severity* of the existing inflammation. I believe that the nervous power is concentrated more powerfully upon the renal blood-vessels than upon the others, as the easiest and most direct route to relieve the system of its morbid nature; and the profound effect made upon this organ is propagated by the sensitive fibres of the sympathetic upon the principle nervous centres, and the nervous power thus excited is reflected upon the sanguiferous vessels and the venous congestion of renal vessels is thus aggravated, and hæmorrhagic effusion is the result. This to me does not seem in the least improbable, and we have numerous instances of spontaneous hæmorrhage occurring from other organs, equally as important, and producing immediate and almost permanent relief; patients being in a prostrate condition are even reported as recovering after a severe hæmorrhage. Believing, then, that this hæmorrhage is beneficial, let us see what effect it tends to have. The influence exerted upon the small vessels of the nervous centres is most profound, and as a consequence, tends to develop the nervous power in a peculiar manner, and with unusual intensity, and a morbid condition is set up, which must be eradicated, or death ensues. Death thus does not result from this extraordinary effusion of blood, which I believe to be a spontaneous effort of nature to relieve itself, in fact, it is her expedient for the removal of a fearful disease; and when the strength is vigorous, and the constitution robust, anti-phlogistic means are required. Therefore, in trying to check the hæmorrhage I committed a grave error, but imagination gave great alarm, and I thought that the symptoms were those of excessive prostration, due to the hæmorrhage; I am now convinced that it was due to the intensity of the congestion in its onward march, and that the hæmorrhage ought to have been let alone, and some powerful remedy directed to the morbid condition resulting from so direct a concentration of the nervous power.

The frequent desire to micturate, and the comparative ease consequent upon each discharge tends to confirm me in this opinion.

Some patients may be so enfeebled as to demand stimulants from

the outset, the disease is so intense, and the *vis vitæ* so sensibly affected that it is impossible for nature to rally from its grasp. All such cases are recognized immediately as hopeless, and tonics, stimulants, astringents, and in fact all medicines are given in vain.

In congestive fevers I have often wondered at the astonishing rapidity with which the morbid powers of life rally from their prostration by a few well directed and well-timed doses. In this severe type of fever, we find convalescence very slow and uncertain, and attended with great pain and debility, but when once recovered, we know that the spell has been the clearing up one, and the patient for some time to come is free from the evil consequences of malarial poisoning.

Can it possibly be that the system is but becoming saturated with it again, and the sufferer to undergo at some future day a second ordeal of vitality and disease? With this staring us in the face does it not become us as the custodians of the public health to investigate this subject most thoroughly, and use our utmost endeavors to prevent the rapid growth of it. You well know that the quantity of miasma generated throughout this paludal district in the last six years, is almost treble that of any previous six years, and still increasing. The reason of this is very evident, for the creeks, ditches and marshes are filling up rapidly with vegetable matter, owing to the present state of labor, and the consequent decay of so much vegetation, and the rank growth consequent upon want of proper culture is sure to bring about an abundant yield of this poison. All of my cases have occurred in regions peculiarly exposed to an abundance of this poison.

Does not all this tend to show that during the coming summer and fall, we may expect to see our friends falling around us, victims to this terrible disease. Our winters are not sufficiently severe or long enough to give us hope to expect much from the effects of cold upon our miasmatic regions. Then we must depend upon our study and investigations to aid us; if possible, post-mortem examinations should be made, and thus enable us to understand the disease more fully. As yet I have known no negroes to be so affected, and consequently post-mortems are not

easily obtained. Our opportunities for procuring pathological specimens will be few indeed, but if possible let us have them; let us get at the pathology, the secret of this malady; let us be the first to explore that stratum yet unturned, in which can be found so much that is valuable, and much that is calculated to relieve suffering humanity, for if there is any one disease, which can cause a man to feel that he is contending with a monstrosity, it is this.

J. D. OSBORN.



ART. VIII.—*Lithotomy; Secondary Haemorrhage; Recovery:* By
T. SIDNEY SCALES, Mobile, Ala.

ON the 20th July, 1867, just ten days after commencing the practice of medicine, I was summoned four miles west of Crawfordville, Miss., with my father (Dr. N. F. Scales), to see a colored lad, thirteen years of age, troubled with symptoms of vesical calculus. The employer stated in his summons that the lad was suffering very much, and could not long survive unless soon relieved.

On arrival, we found our patient in great agony, and declaring that he wanted to "make water so bad." All the rational symptoms of stone being present, we placed the lad on a table, and prepared to sound the bladder without the assistance of an anaesthetic, but finding him timid and difficult to control, a mixture of ether and chloroform was at once administered. Having no steel sounds, we introduced a No. 6 silver catheter, with a bit of cork in the end, and at once came upon the stone firmly impacted against the neck of the bladder, and obstructing its outlet. Introducing my finger into the rectum, an approximative estimate was made of the size and shape of the stone, then, carefully pushing it back with the finger, the catheter was very gently introduced and a quantity of stinking urine was withdrawn, mixed with considerable muco-pus and blood.

As the patient's continuance in the country would necessarily cause inconvenience in treatment, my father advised that he should be brought to his house on the following day, which was accordingly done. On examination of the urine collected from

the morning of one day until that of the subsequent one, litmus reddened by nitric acid, had its color promptly restored. Specific gravity was 1012; heat and nitric acid yielded a moderate precipitate, but to Moore's and Trommer's tests for grape sugar there was no response.

Inferring that the low specific gravity was due to the admixture of blood and muco-pus, and that the precipitate produced by heat and nitric acid was owing to albumen in the blood contained in the urine obtained from the bladder by irritation from the stone, we came to the conclusion that there was not much, if any renal complication, and put him on infusion of *ura ursi* with dilute nitric acid, three times a day, with the intention of operating on Saturday, the 27th, in case the patient's condition would allow it.

Accordingly, at eleven, A. M., of the appointed day, with my father, as staffholder, and Drs. Bonsall, Jones and Thompson, as other assistants, we proceeded to operate. The patient having been fully anaesthetized by Dr. Bonsall, an instrument was then introduced, and coming in contact with the calculus each assistant was invited to sound for himself, and all were convinced of its presence. Introducing my finger into the rectum, to cause contraction, the operation selected was the lateral, which was performed apparently in the usual manner, with very little haemorrhage. The calculus, a beautiful specimen of the rough mulberry nature, weighed about one ounce, and measured four inches on one circumference, and three and three-quarters on the other, requiring considerable traction and rotation for its extraction. The bladder was then washed out with tepid water, and the patient put to bed after the administration of a tablespoonful of whisky with a little morphine.

Sunday, the 28th, calling to see our patient, we were informed by his mother that "his rest had never been better since he was born." His pulse, though a little excited, was as good as expected, with tongue and skin in good condition.

Monday, 29th. Complained of pain in the abdomen, which was quieted by an opiate, but about midnight we were called to him on account of the pain above mentioned, and ordered opium gr. i, to be repeated in two hours if quiet was not obtained from the

first dose; in one half hour we were requested to see him, and told that he was suffering very much, and shaking violently. On arrival, we found him with a severe rigor, and at once feared urinary infiltration, but on inquiry, learned that, contrary to directions frequently given, the mother had taken him upon her lap to have the bed prepared, and while in that condition a considerable quantity of coagulated blood was discharged through the incision. Administered tinct. opium gtt. XL, with acetate of lead grs. ij, which appeared to be of service. We remained near him until 10 A. M., Tuesday, 30th, and finding but little discharge of blood, left him for two hours. On returning home about noon, we were informed that during our absence he had passed, on two separate occasions, pretty large quantities of coagulated blood which was shown us. We then saw that unless the haemorrhage was checked, he must soon succumb, and proceeded at once to an examination of the wound, but found no bleeding. Knowing, however, that the blood came either from the wound or bladder, we injected a steady stream of cold water with a Davidson's syringe against the lips of the wound, which, clearing away the coagula, caused a copious flow of blood. Foiled in our attempt to check the flow with cold water injections, we determined to introduce a lithotomy canula and plug the wound, but on doing so with lint saturated with liq. fer. persulph. the blood flowed freely through the canula, indicating the bladder as the source. The lad being very much exhausted, we thought best not to temporize by experimenting with ice to the hypogastric region, the ether spray apparatus, etc., but determined to inject the bladder with liq. fer. persulph., one part to two parts of water, which at once caused a cessation of the flow, but the loss of blood had increased the pulse beats to one hundred and forty per minute; forty drops tr. opium were then administered, with directions to be repeated every two hours, until three doses were given, and the opium and quinine substituted.

Wednesday morning, 31st. Pulse 108, and a general improvement in all the symptoms; no further haemorrhage since the injection. Opium and quinine continued until 11 A. M. Condition somewhat better though the pulse indicated some excitement and slight febrile action.

Thursday, August 1st. There being no amelioration as to the excitement in the pulse, we determined to remove the canula which came away very easily with no untoward result.

Friday, 2d. Between two and five A. M., had two very copious discharges from the bowels (the first since the operation), which displayed some tendency to diarrhoea but was promptly met by astringents.

Saturday 3d and 4th. Slight improvement in pulse and tongue but great complaint of severe pain in the hypogastric and right lumbar regions inducing us to fear excessive inflammation of the bladder with right renal complication and to quiet the pain opiates were from time administered, and cataplasms applied.

Monday, 5th. General improvement in all the symptoms, the pulse of less frequency and better volume; tongue cleaning off, skin more pleasant, and the general aspect of the boy brighter and more promising.

Sunday, 11th. Steady improvement. Urine passed through the natural channel for the first time, since the occurrence of haemorrhage.

Saturday, 24th. The patient constantly improving, has perfectly recovered, and was this day discharged from treatment.

My object in writing this article, is principally to call attention to the means and manner employed to check the haemorrhage, which I have never seen mentioned in any surgical work, that is, injection of persulphate of iron in solution direct into the bladder. For success in the treatment of the case I am greatly indebted to my father, Dr. N. F. Scales, of Crawfordville, Miss.

ART. IX.—*Reduction of a Dislocation of the Hip-Joint, after nearly Nine Months' displacement:* By A. W. SMYTH, M. D., House Surgeon, Charity Hospital, New Orleans.

MICHAEL LINDEE, a strong, muscular man, aged 27 years, a native of Russia, was admitted into the Charity Hospital, on the 4th of April, 1868, with a dislocation of the left femur upon the dorsum of the ilium. He says that he left New Orleans on the

6th of July, last, for Fort Stockton, Texas; that he was employed as a carpenter by Captain Porter, of the United States Army, and was going there to put up some houses for the Government; that he reached Houston, Texas, on the 13th of July, and in jumping off the railroad car at that place, he fell with some force to the ground, severely injuring his hip. The nature of the injury was not made out for two weeks after the accident (it being considered a sprain), when his attending physician stated that the hip was dislocated, and after giving chloroform, endeavored to reduce it. This was supposed to have been accomplished, and as a good deal of violence had been used, he was required to lay in bed for a month. He tried then to use the limb, but could not walk at all with it. He left Houston two months after the accident, and proceeded to Fort Clark, 130 miles from San Antonio. Here the surgeon examined his hip, and pronounced the dislocation to be unreduced. Chloroform was given him again and a second attempt at reduction was made; this was not successful, and on the following day the surgeon made another effort and failed. He was laid up for three weeks after these attempts. He then went on to Fort Stockton (460 miles from San Antonio), and worked as a carpenter, at the bench, until the 4th of March, 1868, when he left for New Orleans, to have something done if possible for his lameness. He arrived here on the 2d of April, and entered the hospital on the 4th. He was able to walk with the help of a stick, but was quite lame, and suffered a good deal of pain in the hip after walking any distance. The dislocated leg was very slightly shorter than the other, with the foot inverted.

In consultation, Dr. Stone recommended that an attempt should be made at reduction, and on the 7th of April, the patient was placed on the floor, and chloroform administered. The head of the femur was found to be movable, so that not much resistance was felt in carrying the thigh up on the abdomen, but in making abduction, a good deal of snapping and breaking took place. The thigh was rotated out, elevating the head of the bone, and with the help of an assistant, the leg was brought down, the strength of both being required. The dislocated limb was now two inches longer than the other with the foot in a natural position. The appearance was unnatural, but on measuring

from the processes of the ilei, the limbs were the same length ; and measurement in a variety of ways showed that the head of the bone was in the acetabulum. We do not always succeed in the first attempt, even in recent dislocations, and the result was certainly more than I had expected. A splint was applied to keep the leg extended for two weeks. He did not complain of any pain in the joint, and insisted on getting up and leaving the hospital. This he did on the 10th of May, without my consent, walking with a crutch. He returned again on the 16th of May, complaining of pain in the knee, and said that he had hurt it in getting out of the street cars, the driver having started too quickly. A blister was applied over the hip-joint, and efforts made to keep him still. He had an irresistible desire to walk about with a crutch, and contended that the trouble was not in the hip, but in the knee or a little above it. The pain kept increasing, particularly at night, and on the 1st of June, the patient being put to bed, a weight was attached to the limb by means of adhesive plaster, and kept up until the 1st of August. The pain in a few days was relieved. The use of the leg slowly returned, the muscles having become considerably atrophied. He left the hospital on the 28th of August, improving gradually and free from pain. He called to see me in October, and was then able to walk with scarcely a perceptible halt; and he said this was owing entirely to weakness in the limb; I rather suspected it a consequence of the efforts made at reduction.

Some cases of dislocation of the hip-joint, reduced by manipulation, are followed by paralysis of the limb. To ascertain how this is produced, it is only necessary to dislocate the thigh in a subject, by throwing the limb over its fellow as high as possible, and then depressing it, when the head will be thrown out upon the dorsum. If an incision is now made over the sciatic nerve behind the acetabulum, and the head of the bone watched as it is rotated into place again, it will be seen, if *much abduction* is used, to slide over the nerve with sufficient force to injure it. It is even possible in this manœuvre to hook up the nerve and carry it on the neck of the bone as it passes into the acetabulum.

Dislocation of the head of the femur on the dorsum of the ileum is, no doubt, the only dislocation in which the restoration

after reduction) of the joint is possible for a period over eight and a half months. The complete removal from the head of the bone from its articulating surface, and the protection from pressure by the soft muscles of the hip, preserve the articulating surfaces for a long time.

In two cases of dislocation of the head of the femur into the thyroid foramen, reduced in this hospital, soon after the occurrence of the accidents, recovery took place exceedingly slow, the patients leaving the hospital lame after periods of four and six months, and in fact I am not prepared to say they have yet recovered entirely.

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ART. X :—*Pathology and Treatment of Chronic or Indolent Ulcers*, by Dr. D. M. CLAY, Shreveport, La.

The subject of ulcers and ulceration, from quite an early date, has found a prominent place in the literature of Medicine. Monographs and an infinite number of articles have appeared from time to time, for the purpose of elucidating the pathology of ulcers, and of arriving at some definite conclusion as regards their therapeutical management. Thus far, in regard to this disease, we have very little to congratulate ourselves on in the way of progress over those who have preceded us. It would appear from the confusion and uncertainty attending this subject, that observers view the process from different standpoints. For instance: their division and minute subdivision would puzzle and embarrass an able diagnostician, whilst another less able but more enthusiastic might imagine the very delicate distinctions. Nor is this all. The pathology, divested of constitutional causes is almost equally as obscure; so much is this the case that after authority has been consulted, one is scarcely able to detect a point sufficiently salient on which to predicate an opinion. Looking over the vast domains of Surgery with its brilliant achievements, many successes and infinite resources, it must impress all with wonder and astonishment, that *common ulcers*, a class of affections of the utmost importance, and at the same time of such fre-

quent occurrence, are yet allowed to be draped in all that obscurity and uncertainty incident to the days when pathological anatomy and experimental physiology were limited to a small sphere. I dare say the principles enunciated by Bell, Hunter, and others, years and years ago, have met with but little improvement; on the contrary, in some respects, have been much embarrassed by the addition of treatment to meet all the indications observed in those refined distinctions. It is not the object of this paper to point out the minute differences spoken of in text books, regarding appearances, symptoms, and the pathology of the various forms of ulcers, nor indeed do I believe it possible. It may confidently be asserted that a non-specific ulcer will pass through all the varieties either in slow or rapid succession, having a common origin modified by circumstances, extraneous or innate. It is believed that the chronic or indolent ulcer is of by far the most frequent occurrence in the practice of the physician or surgeon, and the one that will tax his patience, time and mind, more than all others, at the same time presenting varieties regarded by some as entities. But the grand division into specific and common, acute and chronic, would appear amply sufficient to meet the nosological arrangement necessary to a clear and rational understanding of their future management, and at the same time it is believed that this division will embody all the vital and pathological changes. The bases on which these nice refinements are made, appear to me utterly inconsistent and at variance with the laws of organic life. We do not know what the peculiar modification is which the texture of an organ undergoes, so that in one case it allows the blood determined towards it to escape from its vessels; in another, it forms pus, or exhales only a thin serum; while in a third, it becomes indurated, softened and ulcerated; but there is a common link which unites these different alterations, and hence it is under the influence of the same cause we often see them produced indifferently and not unfrequently replaced one by the other. But in all these series of phenomena we can perceive throughout the whole course of the disease one constant lesion: namely, hyperæmia, and a succession of morbid alterations in the organic action of the tissue affected, producing alternately the results already mentioned.

On this peculiar organic property of the tissues depends, mea-

surably, the action of ulceration and the concomitant circumstances attending its progress. Whether the cause be originally vascular, such as will result from impoverished diet or continued innate morbid action, producing an increased amount of fibrin, and thereby inducing embolism in the capillaries, or whether it depends upon a morbid influence exerted by the vaso-motor system of nerves, are questions of the gravest import.

It is quite true that in the large majority of cases observed, ulcers were found on the persons of those who lived in squalid huts, and upon an impoverished diet, whose vitality was so low as scarcely to engender ambition or energy to execute a design. It has been proven by the experiments of Magendie that an exclusive non-nitrogenous diet will produce ulceration; particularly is this the case with tissues of low vitality.

Whilst the above constitutional depravities yield readily to affections which have tendencies to produce a breach of continuity, yet how often has the same thing been observed in constitutions presenting unequivocal evidences of vigor and robustness. Again, it has been noticed that certain mental phenomena exercise considerable influence over ulcers, as regards appearance and secretions; the same may be said of sudden fits of indigestion. In numerous cases we may reasonably expect to find causes operating from two different sources to produce an ulcer; the one constitutional and the other local. In the large majority of cases there will be a peculiar constitutional expression as it were, or vital characteristic of individuals suffering from chronic or indolent ulcers. As a class they are a people (if such a position could be assigned them,) bordering on a state of hibernation: they breathe, eat and drink in such a manner as to indicate a mere existence—a feeble desire as it were, to prolong an aimless life. In stature they are usually tall, with a languid circulation; sallow complexion, tumid abdomen, with large veins coursing beneath the integuments, accompanied with more or less varicosity, particularly in the inferior extremities. In habit they are slothful, careless of their person, listless, and in a marked degree contented with any condition of life—almost insusceptible of animation, and completely devoid of energy. This sad picture of human wreck and abject misery, constitutes the history of a large class of those suffering from chronic or indolent

ulcers. Furthermore, they present evidences of early decay, or premature old age, as evinced by a pinched or contracted physique, the silvery locks and the lax dry skin. It is a remarkable fact that the digestive organs may be in a healthy condition and performing their proper functions, with corresponding results—showing a proper nutrition of the body, whilst the nervous system fails to respond in a manner sufficient to meet the demands for interstitial reparation. This peculiar, and apparently antithetical condition, obtains even where individuals receive such an amount of wholesome food and attention as to preclude the possibility of an error in that respect.

The proper distribution of the nervous power, particularly in the vaso-motor system, would at all times maintain an equilibrium between the circulating fluid and the demand for nutrition of the various tissues of the body. Any derangement of a permanent nature affecting the organic or vital properties of tissues, must of necessity result in their total or partial destruction, as is manifested in the affection under consideration, by œdema, varicose veins, and solution of continuity.

These conditions doubtless depend upon the ineffectual vis-a-tergo efforts of the heart, the vaso-motor system of nerves, and the vis-a-fronte, an influence supposed to be exerted on the veins by some vital affinity. When all these causes become combined and operative, another by force of gravity supervenes, which will soon develop itself in an unmistakable manner, by producing the veritable chronic or indolent ulcer,—this last cause, the result of all the others, we choose to denominate pressure. If all probability this pressure is exerted at the junction of the extreme radicals of the arteries and veins, producing a stasis more or less complete, approaching in character embolic formations, and thus a nidus, evidently of low vitality, is formed for the future demolition of the adjacent structures. At the very outset the impress of chronicity is fixed or stamped upon it, as is shown by the everted and callous edges, the character of the discharge, the impaired circulation, and its proving rebellious to ordinary plans of treatment. Contemporaneous with the ulcerative destruction of the tissues, there is a process going on in its immediate vicinity—characterized by an effusion of a caco-plastic—material, or in

other words a fibrillation producing as it were a sclerosis of the parts which effectually constricts the blood vessels and perverts nervous influence. Thus it is shown to my mind conclusively how a breach of continuity may at the very beginning assume a chronic form, in consequence of a barrier being interposed by a vital action of the tissues in an effort, though abortive, at interstitial reparation. From the above deductions we can readily perceive the transition from a purely organic principle to one resulting in a mechanical interference with the process of nutrition, producing chemical combinations inimical to all new formations. Whatever be the chemical combination, or composition of the fluid known in medical parlance as "ichor," certainly it is a most potent element in the destruction of the new granulations. So constant and unvarying is this, that it may confidently be asserted that so long as it exudes will you have a breach of continuity. From whence comes this ichor? Is it a retrograde metamorphosis? In all probability the origin of the ichor is the degeneration or the retrograde metamorphosis of the formative cells generated in a cytoblast, incapable of sustaining a perfect organization. This cytoblast is evidently thrown out during intense local nervous excitation, as is shown by the early attempt at organization and the consequent failure of nutrition, by agglutinating in a semi-solid mass the capillaries.

TREATMENT.

The principles on which the successful treatment of chronic or indolent ulcers is predicated naturally divides itself into constitutional and local, with a close observation as to the most obvious or predominant cause. Tonics and a liberal diet will, as a general thing, meet the indications presented by the constitution; but it is not of unfrequent occurrence that a complication is added to what would appear a general dyscrasia, in the way of mal-assimilation, in fact a condition approaching *tabes mesenterica*.

When such a state exists the appetite may be good and digestion apparently normal, and yet the system fails to respond in a ratio equal to the amount of food consumed; in such a condition, if a careful examination be made, one will rarely fail to detect evidences of *serofula* or some other formidable cachexia. In all

cases it would be well to interrogate the patient rigidly as regards his antecedent history, and his family predisposition to disease, because on this, in some cases, will depend the secret of success. Another constitutional measure which is regarded of the utmost importance is rest in the recumbent posture; indeed, in the generality of cases, I consider this paramount to all other treatment of a preparatory nature:—this injunction, under favorable circumstances, should be rigidly and perseveringly enforced. After this, another very important measure is to be introduced, viz., the position of the affected member, which, as a general thing, should be elevated to an angle of 45° to 60° , consulting in some degree the comfort of the patient. It should be borne in mind, that this remedial measure is one that cannot be persistently employed, in consequence of the production of pain and restraint; furthermore the character and condition of the ulcer must be duly considered and carefully investigated, or much mischief will result. It is a fact I presume notorious in the experience of every surgeon that there are forms and conditions of ulcers where elevation of the member on which they are seated, will invariably result in aggravation of all the symptoms hitherto existing. Such cases will be found in those who have been exhausted by long and continued suffering by the supervention of some other affection of a general character, producing anaemia and intensifying nervous sensibility until it amounts to agonizing irritability. The local phenomena will be a sanguous discharge, intensely acrid, small imperfect granulations, and the adjacent structures not thoroughly infiltrated, nor the edges of the ulcer much everted, on the contrary, it will occasionally be observed, as if bevelled at the expense of the epidermis. I repeat that such a form and condition of ulcers will not be benefitted by elevation. In such cases the treatment should be first directed to the constitution, consisting in tonics, liberal diet and the unsparring use of opiates to appease morbid sensibility and procure rest. I am aware of no agent possessing more powerful, and at the same time more curative influence over that irritable condition of the system induced by an ulcer than opium; in fact it occasionally appears magical in its effects; the dose would be from one to two grains repeated as occasion requires.

We proceed next to speak of the local management and treatment of chronic or indolent ulcers, and when we approach this portion of our subject without any gradation, we stand on the threshold of confusion—a vast labyrinth in which we are licensed to experiment to the fullest extent. No landmarks or clever precedents adorn this unfallow'd field of surgery and pathology, to guide and direct the inexperienced and perplexed practitioner. Resources, however fertile, are not incapable of exhaustion, and the ulcer progresses, fluctuating from bad to worse, until the ingenuity and skill of the surgeon, alike with the patience of the sufferer, are entirely worn out. The remedies assume as wide a range as the instruments selected by a bloodthirsty fighter, from "the point of a needle to the mouth of a cannon," and I presume the effects of the former would be about as variable as that of the latter. The crude and disgusting salves of the old women, the elegant and refined ointments, lotions, etc., of the surgeons, in connexion with their artistic dressing and model appliances, have all alike received their meed of praise and condemnation. Some of the means employed have served their purpose well, and when a due and proper discrimination is made in the selection of cases and remedies we will rarely be disappointed in our anticipations. Thus far it has been my good fortune never to have met with a case that has not yielded promptly to the treatment I am about to detail, and I feel confident it will be equally as successful in the hands of others if the minutiae are properly carried out. In the first place, I would suggest a thorough cleaning of the ulcer of all its secretions, and there are two agents requisite to accomplish this, viz: warmth and moisture, both embodied in a common poultice, made up either of slippery elm, flaxseed or meal. This application, as a general thing, should remain on from twelve to fourteen hours, changing it (the poultice) as often as occasion requires. The poultice not only cleanses the ulcer, but also has a tendency to relax the adjacent parts, and thereby produce a healthy action, or at least acts as a stimulant to the granulations. When the edges are everted, and if there be much callosity in the immediate vicinity of the ulcer, a tenotome should be used in the same manner as recommended in the subcutaneous section of tendons; introducing it on the flat surface, from a half to one inch from the ulcer, thrusting it forward to the base, and cutting widely from

the point of insertion, so as to break or sever all points of adhesion. In the majority of cases, four points will be selected for the introduction of the tenotome, one on each side, one above and below, but of course the practitioner will be governed by the size and position of the ulcer. From what has been already said concerning the pathology of ulcers, this procedure cannot well be overrated, the semi-organized material being broken down, the blood vessels and nerves liberated, the parts are at once placed in a condition for reparation and absorption. The ulcer is now in a condition for permanent dressing, and I would suggest, whatever kind be selected, let the great object be the total and complete exclusion of air. The profession is much indebted to M. Guerin, of France, whose indomitable energy and indefatigable labors in this particular branch of pathology and therapeutics perfected and brought forward in a bold manner his celebrated article denominated "Treatment of Wounds by Pneumatic Occlusion;" almost equally as much are we indebted to Mr. Lister, of England, for the application of remedies possessing the wonderful power of destroying organic germs, and healing wounds with scarcely an evidence of suppuration. Combine these two principles of treatment, the exclusion of air and the destruction of organic germs, and we have a dressing most admirably adapted to the ordinary forms of ulcers, and one that will rarely disappoint us, however sanguine our expectations.

Let the ulcer be thoroughly brushed out with a preparation of from three to four parts of linseed oil, to one part of carbolic acid. After this is done, cut a small piece of linen (older the better) or some other soft fabric, so that it will fit snugly over the affected parts, and allowing the edges to rest on the sound structures; when this is completed, procure a material which is impermeable to air, and the one we have been in the habit of using, is the ordinary tin foil found in the shops. We give preference to the tin foil in consequence of its cheapness, malleability, and being so easily adjusted to any surface, at the same time affording perfect protection to the parts; we usually employ it double, and cut in such a manner as to cover the entire ulcer, overlapping the sound structures from one to two inches; this should be retained in place by small strips of isinglass plaster one half attached to

the foil, and the other to the integuments, taking care that no air can possibly enter from the edges. This, like all other dressings of the kind, should remain on from three to five days, notwithstanding the leakage of the secretions which will not be sufficient indication for removal, on the contrary, will require re-application of the isinglass plaster only. Those who are inexperienced regarding the formation of pus beneath the foil, thereby producing deleterious effects, but such is not the case; it is really astonishing to see what a small amount is secreted, and in numerous instances none at all. The scant or total absence of the secretion of pus is entirely due to the combined influence of occlusion and carbolic acid. There are conditions of ulcers when this kind of dressing will not be followed by beneficial results, and the one by far the most important, is acute inflammation. I am not so sure that the ulcer itself suffers so much as does the surrounding tissues, particularly the integument which is invariably denuded of its epithelium with little points of ulceration scattered over the surface; such cases will be found occurring in individuals of stout and vigorous constitutions, requiring an antiphlogistic course to subject them to other measures. A brisk mercurial cathartic, elevation of the affected part, and limited irrigation with cold water will, as a general thing, combat the inflammatory process sufficiently to apply the dressing in a few days. When the granulations are small, irritable, and their apices covered with aplastic matter; with rather an abundant secretion of ichor, I have seen the permanganate of potash act like a charm; in fact, it far surpasses the tin foil, and carbolic acid. The permanganate of potash will meet in an efficient manner, nearly every indication presented in an ordinary ulcer, from the habitually chronic to the most intensely acute, at the same time affording relief to pain, and changing its vital characteristics. There is one condition of ulcers where this agent will occasionally fail, and this condition is exuberant granulations, when they exceed in height the surrounding integument. And just here it may be necessary to state, the very agent, that would be employed nine times out of ten to correct the evil (I mean nitrate of silver) will certainly fail; according to our ex-

perience it rarely happens, but that a new impetus is given to the growth—a new shelter as it were to the elements of a hot house. The agent we have employed, and would suggest to others to counteract exuberant granulations would be first sulphate of copper brushed over the surface thoroughly, or chronic acid slightly diluted; either will rarely fail to accomplish the object. When the granulations have been checked in their growth, and cut down even with the surrounding integuments, the potassa permanganate will form the chief agent in a dressing which will promote early cicatrization. The manner in which this agent should be employed is of much importance, since it forms almost if not as perfect an occlusion as the dressing first suggested; saturate cotton well carded and clear of trash thoroughly with a solution of from two to four grains to one ounce of water and apply directly to the ulcer, lay over this a thin cloth either of linen or old domestic, then apply loosely a four or many tail bandage, let this dressing remain on for four or five days, and if during this interval any portion of the ulcer presents itself apply small bits of cotton saturated with the solution. We give preference to the cotton as a dressing over the lint for any and all kinds of wounds in consequence of its cheapness, softness, and at the same time being so very accessible. In cases where the constitution has suffered from profuse drainage and much pain, I have seen very happy effects from the local application of a solution ferri. et potassa-tartrat. in connection with the internal administration of tonics and opium; this agent may be employed with the tin foil, the same as recommended for carbolic acid; the strength should be from two to five grains to the ounce of water. I have also seen very happy results from a weak solution of the acid nitrate of mercury in the strength of one to four parts of water, by brushing out the ulcer every three or four days.

The last, and certainly not the least, important, is the dressing for that class of patients who cannot be induced to take the bed, either in consequence of restraint or unavoidable circumstances preventing them from doing so. It consists (after the use of the knife about the ulcer) in strapping the parts, the healthy as well as the unhealthy, with adhesive plaster, commencing at the toes, strapping each one separately (if the ulcer be upon the leg,) thence

to the foot, allowing each strap to overlap the one preceding it from one-fourth to one-half inch throughout the circumference of the limb, taking care not too encircle the member too tightly lest the circulation should be impeded. I have been in the habit of applying to the ulcer, both directly and through the medium of cloth previous to the strapping, either carbolic acid, tartrate of iron and potassa, or the permanganate of potassa. This dressing, when properly applied, will meet all the indications: it will completely exclude the atmosphere, thereby promoting cicatrization, and at the same time will allow the individual free use of his limb.

It has been my good fortune to witness a number of cases in the most intractable forms of ulcers, and I am persuaded from my own observation that the less frequently the ulcers are disturbed by washing and dressing the more rapidly they will progress toward a favorable termination, since the frequent exposure of them to the air tends to destroy the plastic material secreted by the new granulations, and thereby prevents cicatrization. In my opinion any dressing properly applied will continue to do good service for four or six days, and he that interferes with it oftener than that will be disappointed.

CORRESPONDENCE.

NEW ORLEANS, Nov. 21st, 1868.

To the editors of the New Orleans Journal of Medicine:

GENTLEMEN:—Permit me through your estimable Journal, in answer to Dr. W. Mason Turner, of Philadelphia, requesting some suggestions upon two cases, reported by him in your Journal of last October, in which he says; "the positive diagnosis is still in doubt," to ask him if he does think that, in the first case cited, the swelling, or the long irregular prominence, resembling a large weal, lying on the same side of the swelled scrotum, directly along the line of Poupart's ligament, was not due to an accidental inflammation, with induration and augmentation of

the lower fibres of the left *obliquus internus abdominalis*, extending all along the left cremaster, and producing the swelling in the scrotal sac, or rather being a consequence of the swelling of the cremasters.

My diagnosis is founded upon : 1st, two cases of this kind of inflammation of muscles, which fell lately under my observations : 2dly, on the rapid appearance and disappearance of the tumor; 3dly, on the testicles being drawn high up ; 4thly, upon the non-appearance of inflammatory symptoms of the skin.

Before referring to the two cases which I mentioned above, let us cast a rapid glance over the symptoms of *Myotis* or *Myosite*, by which names I do not mean the inflammatory rheumatisms of the muscles, in the continuity of the limbs, but the real inflammation by an accidental cause, whatever, having its origin or seat in the fibres of the muscles, frequently produced, as well in my cases, as probably in the case cited by Dr. Turner, by a sudden or violent jerk, which may bring on an over contraction of the muscular fibres, and even the rupture of some of these fibres. This inflammation may be recognised by the sudden augmentation of a muscle after a sudden pain, in making any effort or any movement made in a false position of the body, the sensibility continuing more or less after the accident, the muscle being swelled, hard, in appearance permanently contracted, keeping in its enlarged state the form of the whole or part of the muscle, rendering it incapable of any new contraction or action ; the skin covering the tumor offering no signs of inflammation. Its termination may be rapid and sudden, or the tumor persist more or less. The inflammation may even terminate by suppuration ; however, in that case, the suppuration takes place more in the cellular tissue lying between the muscular fibres, and reducing them sometimes into a pulposus mass.

Now, let us examine, if from what I have said above of the general symptoms of this kind of inflammation, we can draw the diagnosis of Dr. Turner's case. The history of the case is this :

Some three weeks before, the father was romping with the child on a bed, tossing him over his head, etc., but he positively asserted, that the child was not hit accidentally about the testicles, nor received any injury in that region. Three days after this a

swelling was perceptible in the scrotum, but the child did not complain of it at all. It gradually increased so that the little fellow walked in such a manner as to avoid pressing on the bag. About eight days after this, the swelling along the line of Poupart's ligament came *suddenly*; but of this likewise the boy did not complain, but continued to play as usual. The parents aver that the upper protuberance had come suddenly—that is, on dressing the child in the morning nothing unusual was seen—and on undressing him in the evening (of the same day) they had noticed the enlargement.

As for the non-complaining of the child, we all know how much more pain a child may endure without complaining, than an adult. Here the father had been practising gymnastic exercises with his child, who may, in a sudden effort, have over-contracted the cremasteric muscles and consequently have brought on the inflammation and the permanent contraction of these muscles, which a few days after extended on the left side to the *obliquus internus abdominalis*; the cremasters being but a continuation of the lower fibres of this muscle on each side. The fibres of these muscles being partly adherent to the tunica vaginalis, and even considered by some anatomists as forming it partly, it is easy to understand, that the inflammation of the left cremaster may have extended also to the tunica vaginalis on that side, which may have brought on a secretion of serosity, producing thereby the hydrocele. By the contraction of the cremasters, the testicles were drawn up high and naturally near, and perhaps partly into the external or anterior opening of the inguinal canal, which may have been relaxed or dilated; and when, perhaps, by the operation of the hydrocele, the cremasters were relaxed and the testicles returned to their natural situation, the contraction of the left obliques, pressing strongly on the viscera, forced a portion of the viscera through the canal, thus producing the hernia. The efforts practised to reduce the hernia may have relaxed the contractions of the obliques, causing the disappearance of the tumor; the pressure on the viscera causing the hernia also disappeared; then the case "was decided," as Dr. Evans said to Dr. Turner on his arrival.

The two cases which fell lately under my observation, and

upon which I based my diagnosis of Dr. Turner's case, were as follows :

On the 28th of last June I was called to Mrs. * * * a lady of this city, of habitual good health, who, previously, had never complained of any pains in the abdomen, nor of any inconveniences in the natural functions of the abdominal organs. The day before, or in the morning, as she informed me, in raising her child from the floor, she felt a sudden sensibility when the child laid on her stomach, and she then perceived that she had a tumor in the upper right side of the abdomen. On an examination, I found on the right side of the *linea alba*, a hard tumor extending from the lower ribs to about five inches below, along the *linea alba* about four inches wide, and about half an inch thick, situated immediately under the skin, which kept its natural appearance. This tumor had the form of the *rectus abdominalis*, could be easily held by the fingers, and produced but slight pain by the touch. My diagnosis was immediately established. Myositis of the *rectus abdominalis*, with induration. Baths, poultices to the tumor, use of resolutive ointments, slight cathartics, were my first prescriptions. Two days after, not obtaining as rapid an improvement as I desired, I had recourse to leeches over the tumor, which bled freely, and finally to two or three blisters, which were applied each as soon as the other was healed. About the 26th of July, the tumor after having extended to the lower portion of the *rectus*, disappeared. Since, the lady has enjoyed good health, and does not complain of any abdominal pain.

As to the second case, I only saw the patient once, at the request of my young and talented friend, Dr. de Castellanos. The doctor wished to have my diagnosis, but refused to give me any information of the case, wishing to have my unbiased opinion. This was a young man about 17 years, who had been taking, a few days before, a very active part in a local game called *raquette*, in which much wrestling, dodging and ball throwing are practised. The day after, although he had not at the moment felt any pain, seated near a window, as he wished to look out, he bent himself in a false position, and all at once he was taken with a pain in the side, which prevented his straightening himself. He was still bent on the left side when I saw him

several days after the accident. My first impression was that the pain and inclination of the body, might be caused by an inflammation of the spleen; but on ascertaining that he had had no intermittent fever, and had no engorgement or sensibility of the spleen, I turned my examination to the kidneys, which I found healthy; then I concluded that the disease must rest in the muscles of the lumbar region, and taking hold of the quadratus lumborum, on that side, I found that muscle strongly contracted, swollen and hard. This examination decided my diagnosis, which I am happy to say, will also that of my young friend. As I did not follow the case, I can only add to this that the patient is well.

Respectfully yours,

FRANCIS ALPUENTE.

Letter from New York.—No. 2.

NEW YORK CITY.

DEAR JOURNAL:—This Autumn has been with us one of remarkable health. The mortality rates for the past few months have been steadily on the decline. During the month of October, the average number of deaths in this city has been 399. During September this number was 520; during August, 695; and in July, 817. In June, a most remarkably healthy month in almost all the Eastern States, the mortality amounted to 380. In Brooklyn, the weekly mortality for June was 138, for July, 287, for August, 281, for September, 240, and for October, 156. Last week, one of the healthiest weeks recorded for some time, there was only 336 deaths in New York, and 135 in Brooklyn. We hear the same encouraging report of the state of the public health from most of our large cities. In the neighboring city of Newark, New Jersey, out of a population of little over 100,000, the mortality last week amounted to the small number of 34 deaths. In that city, there has been a considerable amount of typhoid and scarlet fever, but not of an especially malignant character. . . .

The Medical Colleges are in the midst of their Sessions, and are all in an exceedingly flourishing condition. The old lecturers

have once more fairly gotten on their lecturing armor, and are assisted by new comers, in the persons of young men of talent, just entering upon the lecturing stage. In some of the Medical Colleges, there has been several changes in the corps of Professors. In the Dartmouth College, Professor Peaslee enters the department of Diseases of Women and Children, while his former Chair of Anatomy and Physiology is assumed by Prof. Lyman B. Hook, of Manchester, N. H. In the Long Island College Hospital, the Chair of Obstetrics is now filled by Prof. Edward S. Dunster; that of Materia Medica and Therapeutics by Prof. Andrew S. Smith; that of Physiology and Microscopic Anatomy, by Prof. Win. Lusk; Chemistry and Toxicology, by Prof. Plympton; and that of Clinical and Operative Surgery by Prof. Benjamin Howard. The female Medical Colleges were never so flourishing, and the Classes are large and enthusiastic. The students of the Blackwell's Hospital Female Medical College receive part of their lectures at the University Medical College, which still holds its sessions in a part of the New York Hospital.

The clinical advantages of New York City are grand. In no other city of the United States are the resources so immense. To give you some idea of what is going on in this line, allow me to give you the weekly calender of clinics in the different medical colleges, hospitals, infirmaries, etc.: Monday: 2 surgical, 1 obstetrical, 1 medical, 1 venereal, and 2 eye clinics; Tuesday: 3 surgical, 3 medical, 1 ophthalmic; Wednesday: 2 medical, 3 surgical; Thursday: 2 surgical, 2 medical, 1 obstetrical; Friday: 2 surgical, 2 medical, 1 eye and ear, 1 venereal, 1 obstetrical; Saturday: 2 medical, 1 surgical, 1 childrens' diseases. Besides these, on Thursday, at the College of Physicians and Surgeons, Prof. Draper holds a clinic on skin diseases; the Cosmopolitan Eye and Ear Infirmary is open every day at 2 o'clock P. M., and there are many other institutions where most invaluable clinical advantages can be freely enjoyed by all.

Dr. Lemercier, the celebrated French anatomist, whose expected arrival in New York I announced in my November letter to the Western Journal of Medicine, has been delivering to us, with great success, his series of popular lectures on Human and Comparative Anatomy and Physiology. He has been lecturing un-

der the auspices of "The Association for the Advancement of Science and Art" and has been listened to by large and fashionable audiences, with the deepest interest. The structure of the human body, the processes of nutrition, respiration, etc., the comparison of man with other animals, have all been illustrated by models, which are taken to pieces, so that every organ, bone, muscle, vein, artery, and the whole nervous system are seen, one by one, and all together, and all the processes fully explained. At the conclusion of his very interesting lectures, all of which had been handled in a most skillful manner, the following resolutions were adopted with enthusiastic applause :

" WHEREAS, Dr. Lemercier, of Paris, France, has had the enterprise to visit this country and bring with him a larger, more splendid(and by thousands of dollars more costly collection of illustrations of human, animal and vegetable anatomy than has before been exhibited here ; therefore, be it

Resolved, That we hereby express our high admiration of the undertaking of Dr. Lemercier ; and

Resolved, That no words will do justice to either the interesting or the valuable character of the illustrations, natural-sized and magnified, of the human, animal and vegetable kingdoms used by Dr. Lemercier, surprising as specimens of ingenious, scientific art, and wonderful as representations of nature ; and

Resolved, That not only civility to a stranger upon our shores, justice to Dr. Lemercier's fidelity to his subject, and courtesy to a scientific and polished gentleman require, but also a regard for what we believe will give pleasure and profit to all our citizens who may use their opportunity, demands that we heartily commend Dr. Lemercier to the hospitality and kind regards of the American people wherever he may go, feeling assured that however great his deserved success, they will receive still greater value ; for while his reward will be merely money, theirs will be invaluable knowledge."

The Physicians' Mutual Aid Society held a meeting on November 14th, and elected several new officers. As is probably well known by this time, the objects of this organization are to render prompt assistance to the family of any deceased member, by each member under fifty years of age paying one dollar, and those above that age two dollars into a fund for the benefit of the family of any member who dies. Even if it only amounted to a few hundred dollars, it would oftentimes prove most acceptable. All should consider it a duty and a privilege to belong to such

an association. A local paper of to-day has the following: "a fund for the relief of the widows and orphans of deceased physicians is now engaging the attention of the profession, in consequence of the recommendation of the American Medical Association. A plan has been proposed to establish asylums near large cities where universities are in operation, and educational advantages can be secured. To raise the necessary funds, a contribution of \$3 from each physician is suggested, and estimating the number of members in the United States at 150,000, a sum of \$450,000 can be obtained to purchase the ground and erect suitable buildings. To defray the expenses of supporting the establishment, an annual assessment of \$3 is to be made, and the payment of this sum will entitle the family of the contributor to the benefit of the charity. It is calculated that \$50,000 would be sufficient for the support of the asylums, and that \$400,000 would be available for paying pensions to the widows and orphans.

In one of the recent medical journals, a case of popliteal aneurism is reported, in the treatment of which the application of æther spray was tried in addition to digital and instrumental compression. It was thought that the rapid solidification of the tumor was hastened by the spray employed.

We see by letters from across the waters that physicians abroad are still having honors and distinguished orders conferred upon them. Ramberg, who has been called "the Nestor of German Clinical Medicine" has had conferred upon him by the Emperor of Russia, the St. Vladimir Order, third class, and Gottlieb Röttger, of Hamburg, the Royal Order of the Crown, fourth class, by the King of Prussia.

There are many other things that we would like to speak of, Mr. Editor, but space forbids for the present.

Wishing you then, much health, happiness and success in the new year now advancing upon us with such rapid strides,

We remain

yours most truly,

JAMES B. BURNET, M. D.,

Late House Physician at Bellevue Hospital.

Letter from Edinburgh.

EDINBURGH, October 12th, 1868.

Although there is at this time a partial lull in the medical world here, there is evidence of there being much stir in our academic halls in the ensuing winter, partly due to the political rights granted to our graduates for the first time, which necessarily raises into prominence the long vexed question of state medicine. This is a subject, which, considering its importance, it is to be wondered has not further commanded that amount of attention it deserves ; more especially so, it is a question that involves not only the rights and privileges of the medical profession, but also guards the interests of the people at large, who have a strong right to be protected in all that bears on their sanitary condition. The Medical Council recently called into existence, has already been productive of much good, but its constitution is, as yet, of too limited a nature to render it capable of effecting much in the way of reform, especially considering that the powers attributed to the Council are of a very meagre description. The Conservative party have brought forward Mr. Campbell Winton, formerly a Professor in the Department of the Law in our University, a man whose capabilities for the office are considerable, but who is much too tied to the non-progressive party, to give much hope of lending a hand to effect the various reforms that are needed, not only in our University, but in our whole political organization. Mr. Winton's most formidable opponent is Professor Lyon Playfair, who at present holds the Chair of Chemistry in the Edinburgh University. Lacking, as Professor Playfair does, in some points, the qualifications of Mr. Winton, yet, by his masterly command of the most important subjects at issue, combined by a complete freedom from party thralldom, he has placed himself at the head of a large body of supporters who are confident of a successful issue to the contest. Dr. R. W. Richardson is also in the field as a candidate, representing purely medical interests, but on account of his having little personal connection with the Scotch Universities, although a graduate St. Andrew's his chances of success are somewhat small. It was rumored at one time that other candidates representing the medical interests would appear, but

as it was seen that too many candidates representing one interest, had the effect of weakening their cause, by dividing what should be a united party, and thus strengthening their opponents' hands, the propriety of limiting the number of candidates on one side became apparent, so that there is little likelihood of any others now entering the field. The chances at present, so far as the uncertain condition of things will allow, seem to be in favor of Professor Playfair, but of this I will be able to speak certainly in my next.

Another contest of a similar nature is also on the tapis, namely the election of a Chancellor, as since the death of Lord Brougham this office has remained vacant. By the recent Constitution, given by the University Act, all Graduates in Arts, Law, and Medicine, are constituted into a General Council, who are entitled to elect the Chancellor, as well as his successor; the Rector being appointed by the Students, and the Principal by a small body called the Censors who are nominated by the University Court and Lower Council. As the office of Chancellor is merely honorary, and continuing for life, it has hitherto been the custom to confer the honor on the most distinguished representative of Letters who had any connection with the University. Now, though no alumni, yet having twice been chosen as Rector by the Students, Mr. Gladstone has so far identified himself with the interests of the Edinburgh University, as to render him qualified in the eyes of a large body of the General Council, to be elected as Chancellor. The only other candidate is a lawyer well known in his own department, through Scotland, and somewhat in England, but devoid of that wide-spread popularity and fame that Mr. Gladstone has acquired, both as an orator and politician, viz., the Right Honorable John Inglis, Lord Justice General. As representing a party who hitherto have been able to command a large body of supporters, there is a prospect of a pretty close contest, still there is evidence that Mr. Gladstone's position will command the larger number of suffrages.

Lately by the death of Sir David Brewster, the office of Principal was also vacant, and the election which took place in July, is rather memorable, as giving a rather prominent instance of that mutability in opinion, which those who compose a small

elective body are capable of manifesting. For the office of Principal, there were at first a considerable number of candidates, but these eventually were reduced to two, viz., Sir James Y. Simpson, Bart., Professor of Midwifery, in the Edinburgh University, and Sir Alexander Grant, at that time Principal of the Elphinstone College, Bombay.

Now, there was very little divergence in opinion, that of these two men, Sir James Y. Simpson, by his well known talents as an independent scientific investigator, and as an accomplished physician, whose reputation was scattered almost all over the globe, was by far the most eligible, being in addition an alumni of the same University which he adorns as a Professor ; to Sir Alexander Grant, whose principal reputation consisted in an elaborate treatise on the Ethics of Aristotle, published in 1854, which at that time gained him a respectable place among the literati of his country. Unfortunately, the pivot on which the election turned, did anything but add lustre either to the electing body or the Senators of the University, who in a manner, in the opinion of many, unjustifiably interfered in the election.

The Senators conceived it to be their duty some time before the election, to send to the Curators a representation stating that in their opinion, the election of Sir J. Y. Simpson to the Principalship would be injurious to the interests of the University, without giving, as they were bound to do, sufficient proof for such an allegation. This communication was presented at the first meeting of the Curators for the nomination to the office, but it so happened that one was necessarily absent, but whose vote duly attested, was presented in a sealed cover, but on the ground of taking time to consider the representation from the Senators, as well as to allow the absent member sufficient notice thereof, the election was postponed to a subsequent meeting. When they again met, to the great honor and credit of the absent Curator, he frankly stated he saw no reason to change his vote, which was for Sir J. Y. Simpson ; but one from whom better things might have been expected, found reasons for changing his original intention, and thus Sir Alexander Grant was elected by a majority of one. He is expected home in November, as it is the Principal's duty to open the University for the Winter session.

While it is to be regretted that Sir J. Y. Simpson lost the Principalship, yet his usefulness might have been much impaired by accepting an office that would have prevented him carrying on his professional duties in his former efficient manner, so that possibly in this instance, much good may yet result from an election that has been little to the credit of the University and those with whom the nomination rested. As a proof of Sir James Y. Simpson's indefatigable exertions in the promotion of sanitary science, a recent pamphlet on the stamping out of small-pox may be cited, which contains elements of a plan by which small-pox may be as easily confined, as well as stamped out, as the recent cattle plague was done. The principle inculcated is that of entire and perfect isolation—that is, that all cases on their appearance, whether in the higher or lower ranks of life, should be placed as it were in quarantine: that no one should, on any pretense, be allowed to enter the sick chamber; that the attendants and nurses should be those who are certified to be non-conductors, or incapable of being affected, in consequence of having already passed through cow-pox or small-pox. Not only is the seclusion whether at home or in hospital to be continued during the process of the disease, but as is well expressed in the system of regulations shown up by Sir James Y. Simpson during the convalescence from the disease, or *until all power of infecting others is past*. Now, this is a point on which the general public are deplorably ignorant, as they fancy as soon as the disease manifests a remission, that all danger is past, whereas, it is well known to the profession that during convalescence there is more danger from infection than at any other time. One or two instances of this are mentioned in the pamphlet, one particularly, where a healthly merchant took scarlet fever by receiving a letter from the hands of a little girl, his lodge-keeper's daughter, who was in convalescence from the disease, and of which he eventually died. This, therefore proves how, in all infectious diseases, a strict system of quarantine should be enforced; and though in some diseases this measure is only of partial benefit, from the impossibility of complete seclusion from all susceptible of taking the disease, in small-pox this is so far obviated, it is possible to surround the patient by those capable of being affected.

T. MILLAR, M. D., F. R. C. S. E. etc.

WELBORN, Fla., Dec. 18th, 1868.

Editor's Journal of Medicine.

GENTLEMEN—A case of poisoning from strychnine occurred in this place a short time since, and thinking it would be interesting to your readers, I give you the particulars and treatment.

Mrs. W., aged nineteen years, under treatment for disease of the womb. Mr. W. (her husband) in giving, what he thought to be a preparation of opium, gave two and a quarter grains of strychnine. I was called on the night of the 6th inst., in great haste to see her, and upon arriving learned that about forty minutes previous she had taken the drug, and twenty-five minutes after taking it, she complained of feeling very queer, and becoming alarmed, I was sent for to see her.

I found her sitting up in bed and unable to move any of the limbs, and when moved for her, there was great convulsion. Complained of stiffness of the jaws—speech indistinct, tongue trembling and unable to be protruded beyond the lips. Deglutition difficult, breathing laborious—pulse not much affected. Now, here was a case of poisoning by strychnine; what should be done, we have no antidote for it—it was too late to administer an emetic with any hope of success. Considering the case hopeless, I concluded to experiment, I gave her ten drops of the tincture of iodine, but deglutition was performed with so much difficulty that I also gave one drop of it per rectum, and in half an hour the dose was repeated. Up to the time of giving the first dose, she was growing worse rapidly, but as soon as the iodine was given, she grew no worse, and when the second dose was given, she began to improve, and in four hours was free from the effects of the drug, save soreness, which lasted during the day. My reason for trying the iodine was that in prescribing quinine and strychnine in conjunction with iodine I had noticed a precipitate which I supposed to be the latter thrown down. May we not hope upon farther trial, the iodine may be found to be an effectual antidote for that poisoning drug.

Very truly yours,

W.'C. MALLORY, M. D.

1428 N. 7th St., PHILADELPHIA, Dec. 1st, 1868.

MESSRS. EDITORS;—In the October issue of the *Journal*, I reported “two singular cases.” Thinking perhaps the history of the last case may be still remembered, I write you a line or so as regards its *finale*.

This summer, on returning from a brief visit to the sea-side, I was informed by a brother physician, that he had been summoned in my absence to attend Mrs. L., the lady in question—that she had a violent attack of acute dysentery. I called at once to see her. She was then in a low typhoid condition. The same singular sounds as described in my former article, were worse than ever. She sank rapidly; perforation occurred, and she died a few days after my return. I was refused an autopsy. The singular noises and sounds in her head continued until the moment of her demise. She was conscious and complained of them.

I would state, that after I wrote the article before referred to, I made a vaginal examination, and found the womb prolapsed, with considerable leucorrhœa; also, great congestion of the os and neck; but this was all remedied in a few weeks.

Yours truly,

WM. MASON TURNER, M. D.

CHRONICLE OF MEDICAL SCIENCE.

QUARTERLY RECORD OF SURGERY.

COLLATED BY SAM'L LOGAN M. D., PROF. OF SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Remarks on Stammering with other Organs than those of Speech.

By JAMES PAGET, F. R. S., D. C. L.

THE characters of stammering in speech are so well known, and may be so often studied, that we may take this form of disease as the type of a class including similar affections of other organs than those of speech, and may apply to all the same generic name of “stammering.”

Stammering, in whatever organs, appears due to a want of concert between certain muscles that must contract for the expulsion of something, and others that must at the sametime relax to permit the thing to be expelled. Ordinary stammerers cannot at the same time regulate the contraction of the muscles of expiration for the proper expulsion of air, and the relaxation of those of the glottis, or (in different cases) of the tongue or lips, for permitting the expulsion of the air while it is being made vocal or articulate. Numerous as are the varieties and modes of speech-stammering, this discord of muscles is in them all. Its dependence on the nervous system and the mind is in fact plain enough, in theory very difficult. Perhaps it may help the study of speech-stammering, if similar disorders be watched in other parts of the body; but at present I want only to point out the facts.

Stammering urinary organs are not rare; and they may be known by observing, sometimes in the same person, the exact parallelism between the difficulty of expelling urine and that of expelling the air in the ordinary speech-stammering. The patient can often pass his urine without any trouble, especially at customary times and places; and, when he does so, the stream is full and strong, and he has "nothing the matter with him." But, at other times, he suffers all the distress that he might have with a very bad urethral stricture. He cannot pass a drop of urine; or, after a few drops, there comes a painful check, and the more he strains, the less he passes; and then complete retention may ensue and overfilling of the bladder. In these characters, the case may closely resemble one of the ordinary instances of the so-called congestive stricture, in which rapid swelling of some part of the mucous membrane narrows or closes the part of the canal which is least capable of distension. But the circumstances in which the difficulty arises are, in the two cases, very different. The stammering with the bladder occurs in just the same conditions as the stammering speech. There are few stammerers in speech so bad but that they can talk or read fluently when they are alone or with those whom they are most familiar with, or when they are entirely thoughtless as to their manner of speaking. Their worst times are when with strangers, or with persons or in places, that are associated in their minds with stammering. It is just so with the bladder and the urethra. One patient told me that, although he could usually pass urine well, yet there was one person with whom nothing could induce him to walk, because once, when he was with her, he wanted to pass urine, retired, and failed. His experience of the effects of association of thoughts made him sure that, if he were again in the same circumstances, the same distress would come on him more intensely. Another, a clergyman, always passed a catheter before going into his pulpit. He had often had nervous troubles with his bladder; and once or more, having felt a horrid need of passing urine while he was preaching, he found himself, at the end of his sermon, unable to pass any.

He said he felt sure that, if he were to go into his pulpit without the assurance of an empty bladder which his catheter (a No. 12 passed easily) gave him, he should be pressed with the desire to pass urine, and then should have retention. As a speech stammerer might be unable to utter a word, so would he be unable to pass a drop of urine. Again, another patient has described himself as driven to all kinds of devices to bring about the association of ideas or of actions in which he best succeeds in emptying his bladder. He must walk up and down his room, and stand or sit in some customary singular posture, and then be very careful not to direct his mind either too much or too little to what he has to do, and then let the urine run as inconsiderately as he can.

I might add many notes of the seeming caprices of the stammering bladder and urethra, but it may suffice to say that nearly all the phenomena of stammering speech find in them their parallel. In both alike are observed the strong influence of habit and of association of ideas; the effects of transient changes in the vigor of the nervous system; the need of a justly and yet almost unconsciously measured exercise of the will, that it should be neither more nor less than enough; and the influence of distraction of mind. And equally in both classes of patients may be noticed the coincident general sensitiveness of the nervous system, and the family relations with persons who suffer various other forms of nervous disorder.

One or two differences, may, however, be noticed between the urinary and the speaking organs, in their respective stammering. The former cause more pain. The bladder, unable to expel its contents, becomes for a time the seat of the feelings of distress and tightness, and urgent need of emptying, which are felt in more simply mechanical retention of urine; and it becomes more sensitive and more irritable, but probably rather through the constant and earnest attention of the mind, than through any change in its own condition. In cases of long continued urinary stammering, some of which begin in very early life, and some of which I have known for many years, I have seen no indication of any supervening organic disease. After years of trouble, nothing appears wrong but the manner of action of the parts. But though, so far as I have yet seen, their stammering does not produce structural disease of the urinary organs, yet, in many instances of their structural diseases, these organs become very "nervous"—that is, very sensitive and disorderly in their nervous systems; and, in this state, they imitate some of the faults of stammering. Thus, in stricture, especially from congestion of the mucous membrane of the urethra, patients feel that a great part of the difficulty of passing urine, is due to their inability to regulate and harmonise the urinary muscular acts. As a man said to me, "If I could stop the straining, I could do it; but as soon as ever I strain, the spasm comes on." By this he meant that he could not duly moderate the action of the ex-

pelling muscles; and, that as soon as they began to act too vehemently, those that close the urethra would act in spite of him. Just so a stammerer sticks fast in speech; and the faster, the more he strains. And, in similar likeness to stammerers, we may see that most patients with long standing obstruction from stricture or diseased prostate, or whatsoever else, resort to habits or postures, or mere tricks, by which they may gain the advantage of associations of ideas for aiding the successful use of their muscular power.

The treatment of stammering urinary organs has difficulties similar and equal to those of treating stammering speech. The patient must try to educate himself to a calm control of his muscular power; and, on any occasion of failure, must get what help he can from such mental tricks as I have referred to. He should evade all risks of difficulty, and should avoid all the conditions in which he has suffered his worst failures. He should not do anything rather than fail to pass his urine. He should always yield to the first impulse to pass it, but should try to regulate the actions of the bladder to certain fixed hours of the day. And especially he should learn to use a catheter, not only that he may thus relieve himself in case of absolute need, but that he may be free from the emervating dread of helpless retention. He should keep his whole economy, and chiefly the secretion of urine, in the healthiest state he can; for, like all other stammering, or in even a greater degree than any other, that of the urinary organs is influenced by the condition of the general health.

The characters of stammering with the organs of deglutition may generally be recognized by their likeness to those of urinary stammering. They have to be distinguished not only from the mechanical obstructions of the upper part of the œsophagus, whether from stricture, pouch, or other hindrance, but also from the difficulties of swallowing that depend upon paralysis, whether hysterical (so called) or senile, or from progressive muscular atrophy. It is not necesssry that I should try to point out the diagnosis of stammering in deglution from each of these diseases. The common ground of diagnosis from them all is in the predominant influence of mental association in the stammering and its slight, if any, influence in any of the other difficulties. Sometimes swallowing is easy and unhindered; at others very difficult, especially in company, or when the trouble is particularly inconvenient, or the mind is too much set on it. Briefly, nearly all that has been said of stammering with the urinary muscles might be repeated, *mutatis mutandis* of that with the muscles of deglutition; and the principles of treatment must be in both the same.

I have not seen cases enough to be able to discriminate between the stammering and the spasmodic stricture of the œsophagus. I think they are different affections, but I need more opportunities of studying them. If any one will investigate them, much help may be gained from the paper by the late Dr. Brinton, in the

Lancet for Jan. 7th, 1866, and from the remarkable case of fatal spasmodye (or stammering ?) obstruction of the œsophagus recorded by Mr. Henry Power.

I believe that a disorder essentially similar to stammering may be traced among the cases of difficulty of defæcation not due to organic disease; but it requires more study than I have yet been able to devote to it.—*British Medical Journal*.

Fracture of the Pubes, etc., by J. WARING CURRAN, L. R. C. S. L., L. K. Q. P. C. L., etc., Spalding, Lincolnshire.

On the 29th ult., I was summoned, as one of the medical officers of the Great Northern Railway Company, to visit one of the men who was injured near the Spalding Junction. I found him lying by the side of the metals, supported by some of our officials. He was pale and shivering, quite conscious, but suffering the most agonizing pain, which he particularly referred to the lower or right half of the abdomen; the stocking covering the right leg and foot was saturated with blood, which coagulated in its texture, and from the amount of deformity presented by the thigh of same side, together with other unequivocal symptoms, easily determined the existence of fracture of right femur at junction of lower with middle third. After the administration of a restorative, I had him carefully conveyed on stretcher to his lodgings, when I was enabled to make a more exact examination. On the removal of his trowsers, etc., I observed a large lacerated wound fracturing the inner malleolus, and extending over the dorsum of the foot, exposing the bones of the tarsus; the posterior tibial was divided, but the crashing nature of the injury, produced by a truck wheel passing over the foot, prevented much haemorrhage. The fracture of the femur was at once apparent, the upper fragment being tilted upwards and forwards, the inferior backwards and outwards. The upper part of the thigh and lower abdomen was ecchymosed and grazed. At this stage I was met by Dr. Ancell Ball, the other medical officer of the Company, with whose assistance I reduced the fracture and dressed the foot. Our chief anxiety was concentrated on the abdomen, over which the wheel passed. The bladder I relieved by catheter, the introduction of which required some little ingenuity, as there seemed a pouch in front of the prostate, giving the feeling that the instrument was in the bladder. To find the passage at the posterior part of this, unceasing and patience were necessary. On the fourth day after the accident, gangrene of the foot set in; and at a consultation held with Dr. Cammack, J. P. (the eminent surgeon,) and Dr. Ancell Ball, we came to the conclusion that operation was out of the question, owing to the extensive abdominal injuries. The poor fellow died on Sunday morning last, and,

in company with the above gentlemen, I made a *post mortem* examination. The tissues over the pubes and right iliac region were infiltrated with effused blood; the pubes were fractured on both sides,—on the left side the horizontal ramus three quarters of an inch from the symphysis, and on the right side the descending ramus was broken half an inch above its junction with the ascending rami of the ischium. This is the most interesting feature in the case, and attracted the attention of all three, that in an individual not quite twenty-one years of age, the pubes should not have yielded at the line of articulation, as the cartilages were not ossified. Instead of fracturing in the strongest part of the bone, I removed and made a preparation of the bones which shows the cartilages uninjured. The triangular ligament was torn, and the anterior surface of the walls of the sigmoid flexure of the colon, and upper third of the rectum was infiltrated with blood, and presented a bruised appearance, but no laceration existed. We never were able to set up a satisfactory reaction, or rally him from the shock which he sustained.—*Medical Press and Circular.*

Loss of Portion of Lower Jaw and Tongue. Artificial Replacement and Restoration of Articulation: By GEORGE H. PERINE, D.D.S.

* * * IN February I was called upon by Mr. ——, aged forty-eight, of a bilious temperament, who several years previously had submitted to an operation for a disease of the inferior maxillary bone, which extended to and involved the left lateral portion of the tongue. The history of the case, and the precise character of the disease which necessitated the operation, were very imperfectly given by the patient, who had almost lost the power of utterance. Upon examination, I found the mouth in the following condition: A large portion of the left side of the tongue had been removed, and between the first lower bicuspid on the left and the wisdom tooth on the same side, the teeth were removed, and in their place remained a deep depression. On the opposite side of the jaw two bicuspids and one molar were gone. The surface of the tongue, where a portion had been cut away, had healed imperfectly, and there appeared to be a generally unhealthy state of the gums and the soft parts of the mouth. The breath was offensive, and the saliva was ropy. As might be expected, the general health of the patient had suffered, and he seemed anxious and worn.

My treatment was, first, to correct the morbid condition of the tissues by the use of strong astringents. As soon as the state of the parts permitted, I proceeded to take casts of the mouth.

The entire alveolar process between the first bicuspid and the wisdom tooth had been removed, together with a part of the body of the bone; and a large portion of the tongue had also

been amputated. The action of the muscles upon the remaining portion had drawn it back, so that speech was nearly impossible, and deglutition difficult. Nature had made some feeble attempts at restoration, but so far as I could determine, the cavity left by the removal of the process had been only very partially filled by a semi-cartilaginous tissue.

I decided to repair this extended damage by a single denture, made of hard and soft rubber: the vulcanized rubber to sustain the artificial teeth and form a basis for the attachment of the soft rubber, with which I designed to reconstruct the tongue. The hard rubber portion filled the cavity in the jaw, and passing around and resting against the inside of the remaining alveolar process, to the right side, rested upon the gums and formed a support for the artificial teeth to be supplied on that side; the portion fitting into the cavity on the left also forming a support for the artificial teeth on that side. I moulded a piece of soft rubber into the shape of the part of the tongue which had been cut away, and extended from its borders on the right, a thin rubber membrane, forming a sack which could be slipped over and closely fitted to the remaining portion of the tongue, like a glove finger. To the posterior lower border of this portion I attached a ligament of soft rubber, and extended and attached it to the arch or plate of hard rubber above described, so that it drew equally in all directions, and covered the soft parts beneath the tongue. Finally, the hard rubber plate was attached by clasps to the dens sapientis and the first bicuspid on the left, and the second molar and first bicuspid on the right.

This denture far more than exceeded my most sanguine expectations. The patient was enabled to speak with ease, and masticate almost any kind of food. The distortion of his face previous to its introduction was remedied, and his general health much improved.—*Medical Gazette.*

Gunshot Wound of the Thorax: By W. J. C. DUHAMEL, M. D.

THE following case is presented to the profession, not with a view to proposing any new idea or plan of treatment, but for the interest naturally attaching to the variety of its occurrence with so favorable a termination, flying in the face, as it does, of all reasonable prognosis, and yet teaching us an impressive lesson of reliance on the *vis medicatrix naturae*.

Case.—Tuesday, September 3, 1868, Oliver Lyddane, a boy aged thirteen years, a resident of this city, accidentally shot by a pistol in the hands of a companion, the ball entering the cavity of the thorax one inch above the heart, as near as could be ascertained by myself and Drs. Lincoln, Draper, King, and J. F. Thompson, who kindly assisted me in the exploration. External haemorrhage not profuse; some haemoptysis; signs of blood in the left cavity; patient conscious, and external emphysema. No

appearance of the ball in the dorsal region ; left scapula free in its movements, and without pain ; ball not extracted.

B. Elix. calisaya ʒiv, tinct. kino, ʒss, tinct. opii ʒj. M. desert-spoonful every hour. Water dressings to wound.

September 9th.—Patient doing well ; slight haemoptysis ; no external haemorrhage ; no unfavorable symptoms.

September 10th.—Patient quite cheerful and easy ; no fever nor haemoptysis ; external opening contracting rapidly, dry, and exhibiting no appearance of undue inflammation ; pulse seventy-five ; organic functions all normal ; some mucous rales in upper part of left lung ; complains of slight pain in the superficies of the left side, referring it to dorsal region of the diaphragm while sitting up. Continue treatment.

September 17th.—External wound healed completely. Patient well and running about, with no vestige of the wound save the slight pain in the left side of the diaphragm.

Remarks.—Two questions of interest presents themselves in this case. First. What track could the ball follow, to avoid the large and important vessels about the base of the heart as it has evidently done ? Second. What has become of the ball ? My own impression is, as to the first, that it must have traversed the small, sometimes hypothetical, space existing between the arch of the aorta and the left bronchus above and the heart and pulmonary artery and veins beneath, wounding in its passage the thin fold of the left lung which envelopes the base of the heart at this region ; either this, or the angle formed by the left outer wall of the arch and the bronchus. The natural surmise as to the fate of the ball is, that it was arrested by the vertebral column or one of the ribs, perhaps deflected by some surface of these bones oblique to its trajectory and has since gravitated to the floor of the thorax, whence it may one day make its re-appearance in the external world, by ulcerating its way through the diaphragm and into the stomach, thence passing out in the dejections. The boy occasionally joins me in a ride, and expects to resume his studies some time next month.—*Medical Gazette.*

Curious Case of Gunshot Wound.

A curious case of gunshot wound from a stray shot is recorded in the *Rochester and Chatham Times* as having taken place at the Cement Works, Borstal. A woman sitting within the door of her house was suddenly struck in the thigh by a rifle bullet, which passed through her limb, and struck a copper close to her. The flattened bullet was picked up, and it turned out that it was fired by a member of a rifle corps who was practising target firing at the time on Delee Farm, Maidstone-road ; in manipulating his rifle it had accidentally exploded in the air. The ball took a curve over Cookham-hill, and, falling at Borstal, a mile and a half distant, struck the woman in her own house.—*Medical Times and Gazette.*

*Notes of Ward Visits and of Clinical Remarks, London Hospital.
(Cases under the care of Mr. HUTCHINSON.)*

Rodent Cancer, and its differences from Epithelial Cancer.

Monday, October 5.—The visit commenced by the examination of a new case, a man sent up from Haslemere by Dr. S. Hammond on account of rodent ulcer of the face. The disease had destroyed the left eyelids and eye, and had extended over the nose, and downwards on the cheek. The man, who was about sixty, had, however, the appearance of good, country health, and although the disease had existed for six or eight years, none of the lymphatic glands were enlarged. Mr Hutchinson commented on the expression, a “peculiar form of cancer,” which was used by one of the students in reference to this patient. He said that it was a perfectly correct phrase, only we must try to state in what the peculiarity consisted. If a man’s lips were attacked by cancerous action, the result would be “epithelial cancer;” if any part of the upper half of the face, especially the eyelids or adjacent skin, the result would be “rodent cancer.” Why use the two terms? Because the two things differ exceedingly in their clinical history. The epithelial cancer of the lip would cause early implication of the lymphatic glands; these would ulcerate rapidly and extensively, and the patient would probably die within a year of the date at which the original sore became undoubtedly cancerous. In rodent cancer of the skin of the upper part of face the ulcer would extend widely and perhaps deeply; it would extend as all cancers do, regardless of tissue, eating into and destroying all structures it came in contact with, but it would not implicate the glands, and the patient would probably live on, in spite of his local disease and its pain, for ten or twenty years. Thus, the one might be considered a local cancer, and the other a cancer capable of absorption, their difference being in all probability due to the difference in the tissues originally implicated.

Muscular, Cellular, and Periosteal Nodes.

In George Ward there is a very unusual example of cellular or muscular nodes. The patient, a young man of twenty-six, had syphilis six years ago, but soon got quite well, and remained so to the present time. He has recently been liberated after a two years’ sojourn in Warwick Gaol, where he states that although he received every kindness from the surgeon, etc., he was very much under-fed. In gaol he suffered from glandular swellings, but not from any definite symptoms of syphilis. At present he has an isolated hard swelling in front of his sternum, a large loose mass in front of his left vastus internus, and a third tumor in the lower part of the left popliteal space. All of them are quite free from tenderness and inflammatory congestion. They might easily be suspected of being malignant rather than syphilitic were it not for a small ulcer on one leg of very suspicious appearance. Mr. Hutchinson gave a confident diagnosis of syphilis,

and ordered iodide of potassium. He stated that the case illustrated a condition of things which is not by any means frequently met with. Muscular and cellular nodes without inflammation are amongst the rarest of syphilitic symptoms.

Extreme Pallor in connexion with the Cachexia of Inherited Syphilis.

IN the same ward is an excellent example of the extreme anaemia which sometimes attends inherited syphilis. The patient, a little boy, under care for keratitis, presents notched teeth and a fairly characteristic physiognomy. His skin is peculiarly soft and silky, and he is as uniformly pale as it is possible for any one to be; his pallor amounts to almost absolute whiteness, and is not relieved by the slightest tinge of color in the cheeks.

Other Cases of Inherited Syphilis.

THERE are two other good examples of inherited syphilis, and its attendant cachexia, in the wards. One of them, a woman of twenty, is suffering from a most severe attack of keratitis; and the other, a young boy, has numerous nodes, one of which in the right tibia is ulcerated.—*Medical Times and Gazette.*

Lumbar Hernia: By QUINTIUS C. SMITH, M. D.

MRS. S., aged 30 years, of feeble and delicate constitution, was married four years since, and two years since gave birth to a feeble male child. At her birth, there was a tumor in her left posterior lumbar region, which proved to be a hernial tumor. This tumor continued to increase in volume from birth until she was 15 years of age, *pari passu* with her body.

The tumor gave her considerable pain and trouble during childhood, and during this period of time she was unable to perform any labor or make great exertion. From the period of puberty until the 11th of Nov. 1867, (a period of 14 years), the tumor ceased to increase in volume or to give any particular pain or uneasiness unless it received some mechanical violence.

On the 11th of Nov., 1867, Mrs. S. received severe injuries by jumping from a wagon, with which the team was running away. In the fall she dislocated her right ankle, and received severe injuries upon various parts of her person, which injuries caused her to be confined to her room for three months, and indeed greatly disabled her ever since, as her medical attendant failed to reduce her luxated ankle.

At the period of puberty the hernial tumor was about one-half as large as a goose egg, and ceased to increase in volume until she received the injuries above referred to; from which time until she came under my care, it steadily increased in volume, and for one month previous to my attendance caused considerable pain.

The tumor is now about one-half the size of a new-born infant's head. It has a soft, doughy feel, common to omental hernia.—*Nashville Journal of Medicine and Surgery.*

Treatment of Epistaxis by Simple Compression of the Nostrils: By R. P. B. TAAFFE, M. D., M. S. Lond., Surgeon to the Brighton and Sussex Infirmary for Diseases of the Eye.

A FEW day ago, I was called to a case of severe epistaxis of an active character. The patient, a middle-aged man, had been the subject of a good deal of hard brain-work. He had suffered from severe epistaxis on several occasions, for which he had been variously treated, locally and constitutionally. The local treatment, hitherto found successful, was the injection of iced water.

When I saw the patient, he had been bleeding from the nose for some time, and on the day previous had lost so much blood that he fainted. On the whole, the loss having been so considerable, I felt justified in interfering. The thought struck me to try what simple compression of the nostrils close to the nasal bones between the thumb and forefinger would do. I first tried the compression myself, then the patient used his own fingers, first of one hand, then of the other; in the course of about twenty minutes the bleeding was completely arrested. The simplicity of this plan of treatment, when compared with plugging the nostrils, must be apparent. In no medical or surgical work, as far as I know, is mention made of this method.

The situation of the bleeding vessels has generally been supposed to be rather high up in the noses, but here was a case in which the bleeding vessel (or vessels) was either situated below the hard parts, rendering compression comparatively easy of application; or if situated up, the compression caused a clot to be formed, having a firm basis of support, and so plugged the bleeding points. In all cases of epistaxis requiring interference, to which I may in future be called, I shall certainly first try what simple compression of the nostrils between the finger and thumb will do before proceeding to further treatment.—*British Medical Journal.*

Excision of the Scapula.

How far the human frame can withstand mutilation by a skillful hand is well shown in Dr. Rogers's monograph on the above operation.*

* Case of Excision of the Entire Scapula, to which is added a History of the Operations involving a Removal of all, or a considerable part of this Bone; with the view of establishing the Surgical Character and Prognosis of this Class of Operations. By Stephen Rogers, M. D., of New York.

The patient, a little girl of six years of age, had a small tumor removed from the scapula, which, rapidly recurring, threatened life. The following account of the operation is given:—

"The removal of the diseased bone and other diseased structure was decided upon, and the operation was performed on the 12th of December, 1867, when the patient was seven years and nearly five months old. The plan of the operation was to include all of the diseased integument upon the surface of the tumor within the ellipse formed by an interior and a posterior curved incision extending from the cervical base of the tumor, downward to the axilla. The integument was then to be reflected from the whole posterior portion of the tumor, and its attachments to the trunk divided, so as to raise it from the walls of the chest and tip it forward, thus exposing the scapulo-humeral articulation posteriorly; loss of blood meanwhile was to be carefully prevented by tying all bleeding vessels at once, whether arteries or veins. No bone was to be touched except that found diseased. In accordance with this plan, the posterior incision was first made, and the integument reflected, and then in their order were next divided the trapezius, rhomboidei and the levator anguli scapulae muscles. This freed the tumor and diseased scapula from the chest, so that it could be lifted up from the ribs and tilted outward and forward, permitting an inspection of the subscapular portion. In order to fully accomplish this, however, it became necessary to cut away a small portion of the latissimus dorsi, which had become firmly adherent to the tumor at the point this muscle plays over the scapula, also to divide the serratus magnus. This examination shows that the subscapularis muscle was too much involved in the disease to encourage any attempt to save it, so its tendon was divided near the joint, and it was taken with the scapula. As the mass was tipped forward, the coracoid process was seen to be nearly torn away from the body of the bone; an accident resulting from the extreme disease and disintegration of the bone. The division, at this stage of the operation, of the coraco clavicular ligaments, the tendons of the pectoralis minor, of the biceps and of the coracobrachialis saved this process, and it was removed with the mass. The acromion process, however, was left behind and subsequently dissected away from its attachments to the clavicle. The division of the tendon of the subscapularis having exposed the joint capsule, this was now opened about half way around, fully exposing the joint, and finishing the dissection posteriorly. The mass was now returned to its natural position, and the dissection from in front commenced by an incision in accordance with the plan of the operation above described. In order to avoid all suspected integument, this incision had to be carried in its central portion so far forward as to reach the perpendicular line of the joint, and was an unfavorable circumstance, as will presently be seen. The deep dissection from this anterior incision consisted in, first, the

division of the entire scapular portion of the deltoid; second, in the completion of the division of the capsule including the coraco-humeral ligament, the tendons of the supra-and-infra-spinatus and the teres minor muscles; and, third, in the division of the long head of the biceps. The mass now fell away from the body, still attached only by the teres major and the long head of the triceps, which were lastly divided. The operation was concluded by the removal of an enlarged axillary gland, and another one of less size from the cervical region. The amount of hemorrhage was unexpectedly small; the subscapular artery, being the principal one requiring ligature, was tied a short distance from its origin. But three or four ligatures were used. This vast opening exposing the ribs, readily closed up, and the line of the united edges of the wound fell about one inch and a quarter posterior to the head of the humerus, which was fixed by appropriate bandaging directly beneath the acromial end of the clavicle. Reaction was completely established in three hours, a remarkably slight consecutive fever followed, a considerable portion of the extensive wound united by adhesion, the ligatures came away in the usual time, leaving the remainder of the wound to heal by granulation, which it did completely in about forty days. The adhesive process which united the integument to the wound effected a separation of the edges of the flaps at their central portions, leaving a gap at the widest point of about half an inch, through which the posterior portion of the head of the humerus could be seen, and the progress of formation of new attachments and surroundings could be daily observed. The usual process of roughening and ulceration of its synovial and cartilaginous surface, could be seen, and the final appearance of red granulations over the whole ulcerated surface, which formed a part of the granular bed of the closing cicatrix. Owing to the accidental displacement of a broad bandage which had been passed down over the clavicle and under the elbow, for the purpose of maintaining the head of the humerus in close proximity to the outer end of the clavicle, undue pressure had been made upon the skin covering the extremity of that bone, during the first twenty-four hours after the operation, causing it to slough. Nothing serious resulted from it, however, and it cicatrized before the principal wound. The disease was osteo-cancer of the medullary variety, involving the entire scapula, even the processes, and the tumor, six hours after its removal, weighing a little more than three pounds, the weight of the entire body of the child at the time of the operation being thirty-six pounds."

Six weeks after the operation, we are told—

"She could, besides other movements, elevate the arm from the side, between twenty and thirty degrees. Subsequently, all the voluntary movements acquired still greater range. So useful had the extremity become at about the fortieth day, that had it been the right side, it would hardly have been impaired for writ-

ing or easy sewing. When dressed, the resulting deformity was scarcely noticeable. In respect to the utility of the extremity, and the deformity, in this case has resulted as successfully as there was any anatomical possibility of its doing, and more so than there was much reason to expect it would."

After quoting the statements of Mr. Fergusson and others, the author furnishes a very valuable tabular view of all the cases of complete or partial removal of the scapula he can find, and sums up as follows :

" This statement affords all the evidence necessary, it appears to me, to convince the most sceptical surgeon that no part of the scapula is absolutely necessary to the possession of a very useful arm. Of the fifty-six cases given in this table, in twenty-five or nearly fifty per cent., at least three-fourths of the scapula was removed. Of these twenty-five, sixteen are reported as having been followed by a good use of the corresponding arm, about sixty-five per cent. The fact, in truth, being that all the patients who survived the operation, and did not suffer an early return of the disease, retained a good use of the arm. We do not learn from the exhibit of this table that the removal of the entire scapula is a more serious operation than the removal of a greater part of it, for it appears that of the forty-five cases in which more or less of the scapula was removed, ten died of causes more or less directly connected with the operation. One, for example, died of loss of blood ; one of air in the veins during the operation ; four of exhausting suppuration ; three from the shock of the operation and exhaustion : and one from pyæmia. This makes a total of one in four and a half. Now, if we look at the cases in which the entire scapula was removed, preserving the arm, and in a few of them the clavicle was involved also, we see that death as a result, even remotely, of the operation, did not occur in any of them. This result is very markedly in support of Mr. Jones's opinion that the removal of a large part of the scapula for disease is a more dangerous operation than the removal of the whole bone.

" While, unfortunately, no new light upon the pathology or the prognosis of operations performed for cancerous diseases is afforded by this table, it stimulates the brightest hopes for the operation of removing the scapula, preserving the arm, where the destroying disease is caries or necrosis. We are not, however, without hope, even in unquestionably cancerous affections of this bone, while we have such cases as Syme's second and Mussey's first before us. It will be remembered that in the former the head of the humerus was first removed for osteo-cancer ; and recurring in the scapula and clavicle, the former bone was entirely removed, together with the outer end of the latter. This is the case which Mr. Fergusson quotes in high terms of eulogy. This patient was enjoying a useful life years after the last operation. The malignant character of the disease in Mussey's case was sufficiently shown by its having returned after two operations,

which had removed the arm. The third operation carried away the scapula and clavicle; and thirty years after this last operation, the patient, who had then become an old man, still led an active and useful life—a living example of the triumph of persistent surgery over malignant disease."

And as to the dangers of the operation:

"It is quite clear that there is no other bone of the human frame, of the size or weight of the scapula, whose removal certainly involves less injury to muscles, nerves, and vessels, and the loss of no one as large is followed by less disability. Death from shock, therefore, is very unlikely to occur, and from haemorrhage is easily avoided."

He also alludes to and describes eleven cases of traumatic tearing away of the arm and scapula—all of which recovered—to show that the removal of the latter is not necessarily productive of fatal shock. He urges the operation in cancerous disease, and quotes Mr. Paget as follows:—

"The following remarks of Mr. Paget, made upon the occasion of removal of part of the scapula for cancerous disease, are very applicable:—‘In many cases we must operate almost against hope, with a very little probability of recovery. When uncertain as to the character of the disease, the grounds for operation are all the stronger.’"

Our author says, as to the relative dangers, etc., of an entire removal of the bone:—

"Influenced by the knowledge upon the subject which my investigations have furnished me, I would decidedly prefer the removal of the whole bone, rather than a part of it, in cases of malignant disease, particularly if a very considerable portion of it were involved in the growth. The grounds for this preference are—

"First. That the results are quite as good as to the future usefulness of the arm.

"Second. That the dangers attending the operation are scarcely ever greater, generally less; and,

"Third. The liability of the disease to return is probably less. In cases of necrosis and caries, however, these principles are not applicable, as the history of Dr. Walter's and other similar cases shows. In these cases the plan very clearly is to remove little if any more than the diseased tissue, and to avoid the carrying away of periosteum as carefully as possible, for as in Walter's and other similar cases alluded to in the table, a more or less great part of the bone may be reproduced. It will add to the interest of this point to quote Dr. Mussey's statement regarding the reproduction of bone in his case of tearing away the arm and scapula before related. He says:—]

"A year after the injury I saw the patient, and found a bony plate, apparently about three-fourths of an inch wide, taking such a course as to represent the marginal parts of the entire body of the scapula, firmly adherent to the muscular parts be-

neath the skin. This triangular bony frame could be moved upward and downward, backward and forward, by a voluntary motion of the muscles attached to it."—*American Journal of Medical Sciences*, 1837-8, page 386."

He concludes as follow:—

"In conclusion, it may be summarily stated that the exsection of the entire scapula, with preservation of the arm, is an operation of very modern date, first performed, so far as the records have informed us, in 1855.

"The following abstract from our main table will exhibit an outline of the nine, and only cases known to the history of surgery:—

"Langenbeek, in 1855, removed the entire scapula and three inches of the clavicle.

"Syme, in 1856, removed the entire scapula and no more.

"Heyfelder, in 1857, removed the scapula; at the same operation the head of the humerus was also removed.

"Jones, in 1858, removed the entire scapula and about an inch from the outer end of the clavicle.

"Hammer, in 1860, removed the entire scapula and about three-fourths of an inch from the clavicle at its acrominal end.

"Syme, in 1860, removed the entire scapula and outer end of the clavicle, the head of the humerus having been removed at a previous operation.

"Schuh, in 1860, removed the entire scapula and no more.

"Michaux, in 1864, removed the whole scapula and no more.

"Rogers, in 1867, removed the whole scapula and no more.

"The legitimate surgical character of the operation is no longer a subject of doubt, and we are not now liable to the criticism which was so severely bestowed upon Mr. Syme in 1856, for having practised an operation which, at best, must leave a worse than useless arm, as was alleged. On the contrary, it is practised and defended and urged with enthusiasm by the highest surgical authority as the *ne plus ultra* of conservative surgery.

"There is no anatomical or pathological reason why the scapula should not be removed for any disease of the bone, which sound surgery would make it expedient to remove any other bone in the frame for, and in malignant disease of this bone it is safer and better surgery, as it is in similar disease in all bones, to remove the whole rather than a part."

This valuable monograph, with its conclusions drawn from facts, is worthy of preservation in a more permanent form than the pamphlet in which it is issued.—*Boston Medical and Surgical Journal*.

A New Method of Treating Hydrocele, Varicocele, and Varicose Veins: By G. P. HACHENBERG, M. D., U. S. A., Post Surgeon, Ft. Randall, Dakotah Territory.

I.—IN 1855, B. N. B., aged seventy-six, had had hydrocele of the left scrotum two years. The case was unhappily complicated with an organic disease of the portal system. He was highly cachectic. I did not consider it safe to attempt the treatment by exciting inflammation of the tunica vaginalis by the injection of stimulating fluids. Without resorting to paracentesis, I inserted a seton of saddler's silk through the lower anterior part of the scrotum, embracing nearly two inches of the tunica vaginalis. I left the seton for months, until it sloughed away, when the patient was permanently cured of his trouble. The seton at no time seriously incommoded the patient.

I did not repeat this operation, as I adopted a still less painful and simpler method, referred to in a recent number of the Transactions of the American Medical Association. This consisted in letting out the fluid by paracentesis, after which a gum elastic bag, or rather scrotal compress, was adjusted to the scrotum, which the patient wore, without the least inconvenience, for weeks, or until the cure was effected. At no time is the patient confined to bed. These scrotal compresses are made of pure caoutchouc, thin, light, and elastic; are of different sizes, are self-adjusting, and need no bandage to keep them in place. They do not, in my opinion, cure by exciting adhesive inflammation, but by restoring the enfeebled tone of the secretions of the tunica vaginalis.

II.—In 1864, while surgeon of the Veteran Reserve Corps at Nashville, Tenn., a soldier presented himself with varicocele on the left side. The spermatic veins were most prominently involved. In operating, by careful manipulation, I isolated them from the cord, and with the fingers secured them to the side of the scrotum, in as small a compass as possible. I then secured them within the loop of a seton. After the operation the scrotum was treated with ice-water applications occasionally through the day, in order to maintain an astringent effect as well as to counteract active inflammation, and at one time phlebitis in particular. The treatment we had in view was to graduate the inflammation—slowly to bring about such infiltration of serum and fibrous deposit as would so compress the veins as to cut off their circulation long before they were severed by the seton. The scrotum was well supported by the ordinary suspensory bag, and after we had a certain degree of induration and tolerance from the seton, by the aid of a frail elastic band fixed over the left inguinal region by adhesive strips, a gentle tension was kept on the loop of the seton. This, and, at a later period, the use of the savine ointment applied to the seton, greatly facilitated the sloughing, until the seton finally dropped out, leaving the patient relieved of his disease.

Certain cases of varicocele I have relieved by the use of the caoutchouc scrotal compress, and found it an invaluable article for the treatment of saccocoele, hematocoele, and in the latter stages of orchitis.

III.—Last spring, on taking charge of the U. S. Post Hospital at Ft. Randall, D. T., the wife of one of the sergeants of the 22d U. S. I., came under my treatment for varicose veins. The saphenous of the right leg was very much distended, so that its bursting was apprehended by the patient. I began by a system of laxatives, the cold douche, and having her maintain a recumbent position, the leg being kept higher than the body. By this course the heat and venous congestion of the leg soon subsided. We now environed the vein, about four inches above the ankle, with a seton of silver wire, taking care not to transfix it with the needle. For a few days the parts were dressed with cold water applications, and the patient kept in bed. After the parts became somewhat inured to the presence of the seton, at least when there was less tendency to an active inflammatory action, she was permitted at times to go about, and even to attend to her household affairs, still keeping up the cold water dressing. A month after the insertion of the seton a gentle elastic tension on the wire was instituted, which was kept up until it sloughed out. This tension was varied according to circumstances; when it aggravated the inflammation and pain too much, it was suspended for a day or two. In about two months the wire worked itself out, and left the circulation of the leg so altered as to give great relief to the patient. The seton might have been disposed of in less than a month, but only by incurring more inflammation, pain, and perhaps danger.—*Medical Record.*

Intra-Osseous Abscess; Trephining: (Under the care of MR. MAUNDER,) London Hospital.

A LAD about fifteen years of age had experienced more or less constant pain in the upper part of the tibia for three months before admission, the pain being aggravated at night. There was no history of injury, and the youth had not been seriously ill for some years past. He had followed his occupation up to the day of admission. The upper third of the tibia was enlarged to the size of the adult bone, the skin over it being red, hot, and painful, more especially just below the tubercle, where the redness was most pronounced. There was no fluctuation. Leeches and poultice, with good diet and wine, were ordered. All the inflammatory symptoms diminished; but in a few days returned. Leeches and ice were now employed with a similar effect; but the symptoms again returned. Mr. Mauder suspected abscess in the bone; and the trephine discovered one in the centre of

the tibia, beneath the red spot on the skin. Twenty-four hours subsequent to operation, the painful sensations subsided. When we saw him on Wednesday last, the wound was healing rapidly under a dressing of chalk with carbolic-acid oil, and the patient was quite free from any pain.—*Lancet*.

Syphilitic Disease of the Brain ; Optic Neuritis ; Convulsions Beginning Unilaterally : (Under the care of DR. HUGHLINGS JACKSON.) National Hospital for the Epileptic and Paralyzed..

THE following case is one of a class of cases of disease of the nervous system which is, Dr. Hughlings Jackson thinks, the most important of all. We can give but an outline of the history of the main features.

A man, aged twenty-four, was admitted in January, 1868, for convulsive seizures, each of which began in the left hand. After each severe fit he was weak of the left side. His sight was apparently good ; but his field of vision was not tested. Nevertheless, he had double optic neuritis (descending). His eyes were examined by several good ophthalmoscopists (Carter of Stroud, Soelberg Wells, and Clifford Allbutt of Leeds). The patient had also severe pain in the head. Now the disorder of the unilateral muscular region and the "epileptic hemiplegia" showed plainly, Dr. Hughlings Jackson believed, that there were pathological changes in the corresponding cerebral hemisphere. The pain in the head and the optic neuritis showed that the local internal disease was "coarse," and the subsequent cropping up of a node on the right side of the head declared that the "coarse" disease was syphilitic. The fits continued at irregular intervals, and, besides, the muscles of the affected arm were the seat of a great variety of abnormal movements. It is important to observe that, after one severe fit, the right third nerve was palsied. The patient's sight failed a few weeks before his death (Aug. 29th); and on the 8th of August they presented the appearance of the "swollen" disc. As was easily inferrible during the patient's life, there was found at the autopsy a syphilitic mass, or rather a cluster of syphilitic nodules, growing from the dura mater, and seemingly pressing the pia mater before it into the right cerebral hemisphere. Iodide of potassium was given in large doses—ten and twenty grains ; but did little good. The bromide was also given.—*Lancet*.

Carbolic Acid in the Treatment of Warts, Pityriasis Versicolor, and Favus.

DR. P. W. H. JONES, of Liverpool, writes to the *London Lancet* :

—“Some months since, I treated, with a strong spirituous solution of the acid, a considerable crop of these growths on the head of a patient of mine with the most marked success. I have likewise found it eminently curative in the treatment of favus, pityriasis versicolor, and chronic vomiting, in which the presence of sarcinae was detected, and in several other diseases having a cryptogamic origin.

“During my sojourn in Paris in the year 1865, carbolic, or, as it was then named, phenic acid, was extensively employed by several of the most eminent physicians in the city, in the form of inhalation, in the treatment of phthisis and chronic bronchitis, under the belief that the above diseases, if not caused, were certainly aggravated by the presence of one or other of the many parasites to which the human body is liable, as would appear from the recent investigations of the many able men who have directed their attention to the parasitic origin of disease.

“From the experience I have had with carbolic acid as a remedial agent, I am inclined to estimate it as holding a very high position in our *materia medica*.”—*Medical and Surgical Reporter*.

Surgical Cases : (Under the care of MR. W. H. FOLKER.) North Staffordshire Infirmary.

THE notes of the following cases were supplied by Mr. J. M. Taylor, house-surgeon.

Albert H—, aged sixteen, joiner, was admitted into the above infirmary on August 19th, 1867, on account of a tumor existing in the substance of the upper lip. The swelling was on the left of the median line, corresponding to the left central incisor tooth, and seemed to be formed of hypertrophied lip. It caused a good deal of deformity, as the patient was unable to accurately close his lips. The tumor felt hard, but was not painful. On carefully examining the swelling, a small aperture was perceived at its base, and on passing a fine probe a hard substance was felt, which was diagnosed to be a tooth.

Aug. 31st.—An incision having been made through the tumor, a tooth was found at its base. On attempting to extract it by the forceps, it was fractured; this proved to be owing to its peculiar shape, being of a crescentic form, and passing almost at right angles to the alveolus. After its removal the swelling disappeared, and the patient was discharged on the following day.

On the same day Mr. Folker performed lateral lithotomy on a boy of five years, who had suffered from symptoms of stone for twelve months. The operator, after having passed a grooved staff into the bladder, pushed the point of a lithotomy knife into the perineum, half an inch above the anus, and, its point imping-

ing on the staff, by one incision made an opening into the bladder. On passing the index-finger of the left hand through the wound, and introducing the forceps, the calculus was quickly extracted. It was the size of a large bean, and quite smooth.

The patient continued to progress favorable up to the fifth day, when the urine, which until then had passed altogether by the wound, came for the first time in small quantity by the urethra, as well as by the incision.

6th day.—Passed more urine per urethram.

10th day.—Passed more by urethra than by wound.

14th day.—Passed all by urethra; wound closed, except at external orifice.

Discharged on Sept. 23d (24th day), quite well.

Since the above case, Mr. Folker performed lateral lithotomy (Nov. 2d, 1867) in the same manner, using only one incision.

The patient was a boy, aged four years. This case was remarkable from the fact of the urine passing by the urethra immediately after the operation, and on the third day after the operation all the urine passed by the urethra, so that primary union must have taken place in the internal incision.

Discharged on November 18th, quite recovered.—*Lancet.*

Treatment of Fractured Clavicle by a Cross-Shaped Splint : By G. GREWCOCK, Esq., Nottingham.

FRACTURED clavicle, when the fracture is oblique and there is much displacement, occasions much trouble to keep the fragments in proper apposition. When the ordinary figure-of-8 bandage is applied loosely, it is of no use; and when it is put on with the tightness necessary to replace the fragments, it very frequently excoriates the skin, and, by slipping forwards, which is often the case, the bandage presses on the dorsal end of the fractured bone, and, by pressing this downwards, exactly opposes the indications for which it has been adopted. In fact, so dissatisfied have some surgeons become with the figure-of-8 bandage, that it has been in many cases discarded; and one of the most important indications of the accident—namely, to keep the shoulder well back—has been omitted. A plan has lately come into use of keeping the patient in bed two or three weeks, a method which is extremely distasteful to the patient, and is equally unsurgical and unreasonable.

Now, in briefly considering the nature of the accident, the deformities attending it, and the obstacles to be overcome to keep the bones in proper contact for union, are the following: 1. The outer fragment, by the weight of the arm, is carried downwards. 2. By the strong muscles passing from the chest to the arm and shoulder, the outer fragment is carried directly forwards and in-

wards. We have thus three indications to fulfill: by raising the arm, the displacement of the outer fragment downwards is prevented; by the pad in the axilla, it is brought outwards; and by bringing back the shoulder, the opposition of the pectoral muscles is counteracted.

The plan of treating this accident which I wish to bring under notice is not entirely new, as I find, from some old books on fractures, that a modification of it, by the upper straight splint, was used two hundred years ago. A simple cross shaped splint fulfills perfectly all the three indications of the accident, without the disadvantages of the figure-of-8 bandage. The manner in which it is applied is extremely simple. The shoulders, having been well brought back, are fastened to the extremities of the splint by means of a bandage passing under the axilla and over the shoulder, thus effectually overcoming the resistance of the thoracic muscles. A small pad is placed in the axilla, and the bandage, passed over the arm and fastened behind to the splint, keeps the pad in its place.

I have treated several cases by this method, and found it gave greater ease to the patient than the figure-of-8 bandage, and fulfilled perfectly all the indications necessary for the successful treatment of the accident.—*British Medical Journal*.

Tracheotomy: By W. H. MUSSEY, M. D., of Cincinnati.

In this operation success often depends upon keeping the artificial passage freely open. To secure this a tube has been devised, but in many cases it can not be tolerated, and is the source of inflammation and increased secretion of mucus. To meet the emergency in one case, I took the ordinary wire speculum for separating the eye-lids, cut off the bows and adapted the instrument for this purpose. It was retained without producing the slightest inflammation, or irritation even, and the patient recovered. In other cases it has proved a valuable substitute for the tube.

1—*Treatment of Aneurism by Pressure:* By W. MUSSEY, M. D., of Cincinnati. *

Is recommended where the circulation of the blood can be entirely arrested. Mr. Mapother, Surgeon to St. Vincent Hospital, Dublin, reports a case of ilio-femoral aneurism cured by pressure, for four and a half hours, upon the common iliae, and a case of popliteal aneurism of two weeks' standing, by pressure upon the

femoral artery in Scarpa's triangle for nine and a half hours. The essential element of success being the *complete arrest* of circulation in the sac till coagulation of its contents is effected. The inability to apply such pressure, or the failure to arrest circulation, are the obstacles to success.

In the year 1857, I resorted to the following expedient to cure a traumatic aneurism of the palmar arch, where the hand was extremely swollen and tumefied, and the region of the wound spongy and almost gangrenous. I moulded a piece of gutta-percha to the back of the hand and two-thirds of the length of the forearm, bringing the two edges at right angles and above the level of the palmar surface of the limb; I took another piece of gutta-percha and moulded it over these edges, fitting it as a cover upon a box; in this cover, over the situation of the radial artery, an inch above the radio-carpal articulation, I cut a fenestrum one and one-fourth inch in length and a half inch in width, through which I placed compresses that projected above the surface of the "cover" an inch, held in place with adhesive strips and a bandage applied over the whole apparatus. This controlled the haemorrhage for a couple of days, when it became evident that the ulna artery was furnishing too much circulation to the injured artery, a fenestrum was made in the "cover" over the situation of this artery also, and a complete cure followed without any injury to the hand. By this plan any artery of the upper or lower extremity can be compressed without interfering with the circulation except at the point of application. Indeed, it would not be difficult to fix the head and neck in a mould, so that a tourniquet could be applied directly to the carotid in a case requiring its compression.

2.—*The Treatment of Umbilical Hernia*

IN infants and young children is a very frequent necessity, and the plan proposed and employed by my honored father, the late R. D. Massey, for thirty or more years before his death, is so simple and effective that I record it here:

The hernia is pressed back with one fore finger when the thumb and index finger of the other hand gathers up the integument, invaginates it, and retains it until a piece of adhesive plaster, one and a half to two and a quarter inches in width, long enough to extend two-thirds the circumference of the body, is applied. It may be necessary to re-apply every third or seventh day. If the plan is persevered in a cure is certain to result.

3.—*Fissures of Anus.*

I HAVE treated a large number of these fissures since 1853, at first following the plan of stretching the *sphincter ani* with a finger of each hand till the rupture was effected, as I was instructed to do by Mr. Axenfield, Interne of Eourcine Hospital, in Paris, in the year 1852. This procedure I found to answer in many cases

of anemic females with lax muscular fiber, but in vigorous subjects the "stretching" would only occasionally produce complete rupture. I substituted the plan of cutting the muscle at the seat of the fissure, but this plan was followed by a long process of healing. I now prefer the *subcutaneous* division of the *sphincter ani* at a distance from the fissure, as the cicatrization is more rapid and is attended with less local irritation.—*Leavenworth Medical Journal.*

Reports of Societies ; Liverpool Medical Institute.

M. BANKS showed a Diseased Spinal Cord which was removed from the body of a young woman who, while resisting a criminal assault upon her, wrenches her back violently over the arm of a sofa. She complained of pain at the seat of the strain and prickling in the legs, but there was no loss of power in them. Next day the lower limbs became weak, and this feeling rapidly increased, so that in an hour she was almost completely paraplegic. She was taken to the infirmary, and died on the tenth day with sloughing, etc.

On *post-mortem* examination, no fracture or dislocation was found, nor were there any of the ligaments ruptured or particularly stretched. The outer envelopes of the cord were dilated with serum, a quantity of which escaped on opening them. There was only a small quantity of lymph under the arachnoid. On making a longitudinal incision through the cord, it was found completely disintegrated and acutely softened, all connection having been cut off between the parts above and below. This disintegration involved the whole thickness of the cord for about half an inch. This case proved that the cord could be severely injured without any injury to the bones.

Mr. Hakes remarked, that in this case sensibility returned rather suddenly over the lower part of the abdomen and upper parts of the thighs about three days before death, and remained a few hours.—Mr. Bickerton and Dr. Oxley made some observations on the case. Mr. Banks, in replying, said this case was important in connection with railway accidents, as the same changes might take place by a chronic process. Mr. Bickerton stated that, in more than 1,400 cases of railway injuries, he had never met with anything of the kind.—*British Medical Journal.*

QUARTERLY RECORD OF OPHTHALMIC AND AURAL SURGERY.

COLLATED BY W. S. MITCHELL, M. D., PROF. OF ANATOMY, AND OPHTHALMIC MEDICINE AND SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Three Cases of Traumatic Perforation of the Membrana Tympani.
Read before the Boston Society for Medical Improvement,
by HENRY L. SHAW, M. D.

THE bony commencement of the membrana tympani effectually protects it from mechanical injury, except in cases where it is reached through the external auditory passage. The small size of the passage, its natural obliquity, and the sensitiveness of its lining membrane, insure it against the accidental introduction of foreign bodies, except in some rare instances. The three cases of traumatic perforation of the membrana tympani which are cited below are cases of this kind, and are particularly interesting as showing the readiness with which the wounds of the healthy membrane heal, when not complicated with trouble of the tympanum. In two of the cases reported, the injury was confined to the membrane. The third, the notes of which are not complete, remains in doubt, although it is very probable that the tympanum was involved. As will be seen, the seat of the perforation is the same in all of the cases, viz., at the anterior and inferior part. It is at this part of the drum that traumatic injuries almost always take place. This can hardly be accidental, and is undoubtedly due to the peculiar shape of the external surface of the membrana tympani, which is concavo-convex. The prominence of the malleus probably increases the resistance of the membrane at this point, and serves to divert the force of the blow to the inferior parts of the drum. The above explanation we do not remember to have seen.

June 21st, 1868.—Mr._____, age 28, bookkeeper. Day before yesterday, while the pointed end of a rubber pen-holder was in the external meatus of the right ear, his elbow was struck by a friend with such force as to push the point of the holder through the membrana tympani. The pain at the time of the accident was severe; after half an hour it increased in severity, and continued for several hours. On using his handkerchief, soon after the accident, he found that the air passed frequently through the ear, accompanied with an audible whistle. Being a gentleman of intelligence, he immediately surmised what had happened. Since the subsidence of the acute pain of the first day, he has had a dull aching, with a feeling of fulness in the affected side of the head. His chief annoyance, however, has been the constant tinnitus, which he describes as very loud, almost unfitting him for business. On examination, the hearing point, with watch, was $2\frac{1}{2}$ inches. Conversational power much diminished. As

usual in aural cases, the power of the (left) well ear was tested. It was found to be but 2 inches. He was then for the first time made aware of the deafness of this (left) ear, which he had always considered perfectly good. The external auditory passage of the injured ear was normal, with the exception of slight moisture at the bottom. The membrana tympani was dull, white, and showed no signs of active inflammation. The handle of the malleus was plainly seen, and just below and anterior to it was a circular perforation rather more than a line and a half in diameter, with sharp and well-defined edges. Through this opening air from the throat readily passed. He has been troubled with pharyngeal catarrh for several months, and there is now chronic inflammation of the mucous membrane of the fauces.

The large size and shape of the wound in the drum seemed to preclude the possibility of its ever being restored to its normal condition. As is well known, cases of perforation, either of traumatic origin or from disease, when of this size, or even much smaller are very liable to go through a long suppurative process. After more or less disorganization of the middle ear, they sometimes heal, but the hearing is almost always much impaired. The absence of inflammatory symptoms in this case seemed to call for stimulation of the edges of the perforation with nitrate of silver or some other agent; but from experience in previous cases it was thought best not to make any application to the injured parts.

Treatment.—Tincture of iodine to be painted frequently over the mastoid process, until it becomes sore, and then to be used often enough to keep it so. In case of pain, leeches front of the ear. If there should be any discharge, injections of tepid water sufficiently often to keep the parts thoroughly clean. The patient was requested to avoid using the handkerchief, and on no account to force air through the injured membrane.

June 30th.—No change in the perforation. Has had no pain or discharge. The tinnitus continues, obliging him to give up business as accountant during the day. Is, however, able to do a little at night, when it is perfectly quiet. Mastoid quite sore from iodine.

July 3d.—Hearing point, with watch, 4 inches, an improvement of $1\frac{1}{2}$ inch. Tinnitus in full force. Otherwise as at previous visit. Ordered chl. potass. gargle for the throat.

15th.—Tinnitus as bad as ever. Is still unable to do business during the day. The ear looks the same as at first visit, with the exception of the absence of moisture at the bottom of the canal. No apparent diminution of the opening in the drum. Hearing point, 4 inches. Thinks conversational power slightly improved.

Aug. 6th.—Has reported every few days. Since last visit, has noticed decreased intensity of the tinnitus, and a decided improvement of the hearing. Has been able to attend to business the last few days. Noticed, a day or two ago, on using the

handkerchief, that air did not pass through the ear. Hearing point, 8 inches. Conversational power very much improved.

On examination of the membrana tympani, the perforation was found perfectly healed, and no trace of it to be seen, either with solar or artificial light. Just above the point perforated was a white spot of recent origin, the exact nature of which is unknown.

Sept. 18th.—The patient called to-day. The ear feels perfectly well. Hearing point, 14 inches. The membrane of the tympanum looks the same as at previous visit.

Feb. 21st, 1867.—Miss—, age 24. For several years has been in the habit of using ear-picks of various kinds. Three days ago, while using one-half of a shell hairpin, her elbow accidentally slipped, and the point of the pin was pushed through the membrana tympani. It was attended with giddiness, lasting for several minutes, which was followed by a feeling of weight and fulness in the head, as in the previous case. Deafness was noticed almost immediately, and has gradually increased. Tinnitus and violent throbbing, the latter synchronous with the pulse, came on after a few hours, and has continued ever since. The second day the ear was tender, and the auditory passage somewhat swollen and red, which was relieved by the application of warm fomentations to the external ear.

Result of Examination.—Conversational power good. Watch heard at $\frac{1}{4}$ inch. Inner half of external auditory passage slightly inflamed; a thin, serous discharge at the bottom. Membrana tympani inflamed and unusually vascular over malleus. At the anterior and inferior part is a perforation, nearly circular, about one line in diameter. Through this opening air passes from the throat readily, as shown by the otoscope.

Treatment.—Two leeches front of the ear; to paint tincture of iodine frequently over the mastoid process, to keep the part sore; and to avoid forcing air through the drum. Iron and quinine internally.

Feb. 26th.—The ear has been comfortable since last visit. The auditory passage is of a normal color; the drum still a little vascular. The perforation unaltered. No moisture noticed. No throbbing for the last twenty-four hours. The tinnitus is less loud. Patient sometimes free from it for an hour at a time.

March 2d.—The perforation looks smaller; is now only seen as a small point with white edges. Tinnitus hardly perceptible, except when perfectly quiet. Hearing point, $2\frac{1}{2}$ inches. Mastoid sore from iodine.

March 7th.—Patient has noticed a decided improvement of hearing within a day or two, with complete absence of tinnitus. Says the ear feels more natural. On examining the membrana tympani, it was found healed. The seat of the perforation could hardly be made out; the cicatrized portion looks a little dull and whiter than the rest of the drum. Point, with watch, 11 inches. Conversational power normal.

16th.—The ear was examined to-day, and no trace of the perforation could be seen. Hearing point 13 inches, being a little less than normal. She was discharged, with directions to report if troubled further.

Aug. 29th, 1867.—Mr. —— came to the infirmary with the following story. Ten days ago, while fishing, he slipped from a stone on which he stood, and, to avoid falling into the water, threw himself with considerable force headlong into some bushes. A severe shooting pain in the side of the head was noticed at the time, and a sensation as if something bad entered the ear. He thought a twig went in at the time of the accident, but supposed it had immediately dislodged. The pain was of short duration, and was followed by a heavy feeling in the head. On the way home, deafness was noticed, and also a very slight discharge of blood from the external meatus. For the past week there have been dull, aching pains, particularly at night, sometimes depriving him of sleep. The second day after the accident, the deafness increased very much. Within the past two days, there has been a muco-purulent discharge, which at times has run from the ear. There has been constant tinnitus since the accident. By the advice of his physician, injections of soapsuds have been used several times.

Result of Examination.—Hearing point of watch (from memory), not heard at all. The external auditory passage shows a "fit" muco-purulent discharge. The whole lining membrane is inflamed; the bottom slightly swollen. Membrana tympani uniformly red; no distinct vessels to be made out. The projection of the malleus barely discernible. The drum, at its anterior and inferior part, is penetrated by a foreign body, which occupies the inner two-thirds of the auditory passage.

The foreign body, which proved to be a twig, was grasped with a pair of rectangular forceps, and after using considerable traction it was removed. A slight oozing of blood from the tympanum and the edges of the wounded drum followed. The parts were afterwards cleansed with tepid water. The diameter of the perforation was, from ulceration, larger than that of the twig, which measured one inch in length and about one-eighth of an inch in diameter.

The patient was ordered two leeches front of the ear, and injections of tepid water twice a day, with instruction to report in a day or two. The complete history of this case would be interesting, and it is to be regretted that the patient never returned.

—*Boston Medical and Surgical Journal.*

A Case of Calcification of the Choroid, Ciliary Processes, Crystal-line Lens, and Capsule: By CHAS. A. HART, M.D., New York.

J. KRISSINGER, aged about 55 years, was presented to me, June

25th by Dr. W. A. Garman, of Berlin, Somerset County, Pa., who requested me to examine the patient for a supposed cataract.

The history rendered was as follows: Twenty years ago he began to experience a loss of vision in both eyes, which, after a considerable period, rendered him totally blind in the right organ, vision being still preserved to a limited extent in the left; this condition being attended with considerable pain, relief was sought, and he presented himself to Dr. Gross, of Berlin, who pronounced his case one of hard cataract, and finally attempted the operation of depression, which afforded no relief. He has been the subject of frequent rheumatic attacks. Objectively the appearances presented, when I saw him, were as follows: The globe was atrophic, the cornea presented evidences of former inflammatory action, having a roughened and semi-opaque appearance. The pupillary space was occupied by a dirty, yellowish-white body. The iris having lost its power of action, was uninfluenced by either light or solution of atropia.

Neither the ophthalmoscope nor concentrated light revealed anything beyond the dense character of the lens.

The patient was very much distressed by the constant pain he was suffering, and there seemed to be no chance of relief other than enucleation, which being proposed, was accepted. Accordingly I performed the operation on the 30th of June. The morbid changes, found upon an examination of the eye were a complete calcification of the choroidal tunic, very dense about the optic disk, gradually thinning off toward the ciliary processes, which were also filled with calcified deposits, though not in a perfect state of organization; none of the true choroidal tissue could be discovered. The retina was thickened, and in several places detached; the optic disk was atrophied, with no trace of the vessels remaining. The vitreous body was broken down and changed into a fluid mass, which contained a quantity of crystalline matter resembling cholesterine, though I cannot assert that it was such, being without a microscope at the time. The crystalline lens and capsule were both found in the normal position; the capsule being thickened and opaque, and when opened grated under the knife like sand, revealing the lens shrunken in diameter and completely calcified, together with an unorganized white crystalline paste, which, having since been examined with the microscope, proves to be crystals of cholesterine with a few of the phosphate of lime. The lens was examined, by defect light through the bull's-eye condenser, with the one-inch objective; the surface was a yellowish-white color, perforated by numerous minute foraminae. Nothing resembling the minute structure of bone could be discovered. The patient recovered nicely from the operation, and has since been entirely free from obstruction.
—*New York Medical Journal.*

A Case of Sympathetic Ophthalmia Cured by Neurotomy: A Substitute for Removal of the Eyeball. By J. Z. LAURENCE, M. B., F. R. C. S., Surgeon to the Ophthalmic Hospital, Southwark, and to St. Bartholomew's Hospital, Chatham.

SYMPATHETIC ophthalmia is, undoubtedly, one of the most dangerous forms of ophthalmia, both from its insidious progress and its ultimate effect—blindness. It is, in nine cases out of ten, an inflammation of one eye succeeding traumatic destruction of the other. Its symptoms are of an asthenoplastic nature: intolerance of light, inability of using the eye for any length of time, watering and redness of the eye, and (what is pathologically of cardinal importance) *the capillary injection and tenderness of the ciliary region*—“cycritis” of German authors. After a time, a slow plastic form of iritis sets in, ending in occlusion of the pupil, softening and atrophy of the globe—in a word, in blindness; and as the primarily injured eye is generally destitute of sight, the patient becomes totally blind.

Now it was found that but one desperate remedy existed to check the sympathetic ophthalmia—namely, removal of the primarily destroyed eyeball: an operation severe, bloody and disfiguring to the patient—an operation only admissible from the known funereal consequences to the sympathetically affected eye if we allowed the injured one to remain.

After it was established that sympathetic ophthalmia consisted in propagated cycritis, Dr. E. Meyer, of Paris, on a suggestion of Professor von Graefe, in three cases succeeded in curing the sympathetic ophthalmia by *dividing the ciliary nerves* of the primarily affected eye. He has been followed by Professor Secondi, of Genoa; and now I have the honor to lay before the profession a fifth successful case.

T. S.—, aged 20, was admitted into St. Bartholomew's Hospital, Chatham, under my care, on June 20th. Twelve years previously a piece of steel had struck his left eye. He had still perception of light; scleritis and cycritis were present. By means of a probe, it was found that the most tender part of the ciliary region was situated downwards and outwards. The tension of the globe was normal. He complained of great intolerance of light in the uninjured eye—the right one; as soon as he fixed this upon any object pain and watering ensued, so that the eye was practically useless to him for any near occupation; but for distant objects his vision was found to be perfect ($\delta=1$). On the 22d I made an incision of about half inch along the tender part of the ciliary region of the primarily injured eye; a little vitreous escaped.

Aug 3rd—Left the hospital perfectly cured. He could now read for hours together with comfort with his left eye, and all traces of the trifling operation on his right eye were gone.

On October 24th a letter was received from the patient, stating that “he could read for five or six hours at a time with-

but any pain whatever ; " that he is engaged in " steel-turning, which is very trying to the eyes, but is happy to say it does not affect him but very little." The eyes does not water. He finds working by gas-light painful, but day-light does not affect the (right) eye in the least. He finds objects appear to him " closer than they really are."—*The London Lancet.*

Paralysis of the Third, Fourth and Sixth Cranial Nerves on the Right Side; Dilated Pupil and Loss of Adaptation of Right Eye; Double Vision; Local Action of Atropia and Culinabar Bean.
Under the care of DR. FLEMING, Queen's Hospital, Birmingham. (Reported by JAMES SAWYER, M. B., Resident Physician.)

R. P., AGED 35, miner, was admitted on June 21st, 1868.

History.—He enjoyed good health until six months ago when he first felt pain at the back part of the head and over the right parietal eminence. He does not remember any blow upon the head nor fit of any kind, there is no indications of the tubercular or cancerous cachexis, and he firmly denies having ever had syphilis. The pain was dull and heavy, gradually increased in severity, scarcely ever left him, and prevented him sleeping at night. About four months ago vomiting came on and he rejected almost every meal as soon as it was taken ; and when the stomach had emptied itself the retching still continued. His appetite remained good, there was no pain after meals, and his bowels were constipated. The vomiting gradually became less frequent, and ceased entirely about three weeks after its accession. The pain at the back and side of the head then became less severe, but he suffered from acute pain of a darting neuralgic character in the right temple and right eye-ball. This pain sometimes all but subsided, and was subject to sudden and violent exacerbations. Three months ago he noticed drooping of the right eyelid with difficulty in raising it, and inability to open the eye completely. Double vision came on about the same time.

Present Condition.—The right eye is closed and he is quite unable to open it. There is a perfect power over the levator palpebrae on the left side. He can shut firmly the right eye ; there is no loss of the general symmetry of the face ; and there is no evidence of facial palsy whatever. There is no impairment of sensibility on the right side of the face, or the conjunctiva, and the fifth nerve is not interfered with in any way. The right pupil is dilated and perfectly insensible to light. The antero-posterior axis of the right eye-ball is directed forwards ; he is unable to move the eye inwards, outwards, downwards or upwards, and the power of rotating the eye-ball on its axis is lost. The muscular apparatus of the left eye is not in any way impaired, and when he looks straight before him the eyes are quite parallel. The

focal distance of the right eye is eight inches, and there is complete loss of adaptation for near vision, an object brought within this distance appears hazy and indistinct. The power of adaptation is unimpaired on the left side. When he looks with both eyes at an object about three feet from him he can see it distinctly, but there appears half-overlying it an enlarged and shadowy image of the same object. If the right be closed, he sees the object distinctly with the left, but if the left be closed he sees the larger hazy image only, which, when he uses both eyes, overlies the distinct image in the manner described.

The ophthalmoscope fails to reveal any morbid change in the right retina, and the crystalline lens is perfectly clear and yields normal results with the catoptric test. When he has looked through a microscope at a test object with the left eye, and the instrument has been adjusted for distinct vision, and then uses the right eye, it is found that the distance between the lens and the object has to be increased to bring the latter into focus. It is then seen, however, as clearly with the right eye as with the left. The mind is unimpaired, the articulation is normal, and there is no trace of paralysis except as stated in the right eye and upper eye-lid.

Dr. Fleming suggested observations on the right eye as to the effects of the calabar bean and of atropia. A small quantity of the extract of calabar bean was placed in the right eye, the diameter of the pupil being then five-sixteenths of an inch. A little smarting was immediately felt in the eye. In about fifteen minutes the pupil began to contract, and in about half an hour the double vision had disappeared. In another hour the right pupil was smaller than the left and insensible to light, and he could then see objects distinctly held three inches from the right eye. Twenty-two hours after the introduction of the calabar bean the double vision returned, although the pupil had not quite regained its usual size. After an hour or two more the pupil had become as widely dilated as before the use of the bean. On another day a few drops of solution of atropia were placed in the right eye. The effects were a still greater widening of the pupil and more marked amblyopia. He was ordered to take, thrice daily, a mixture containing iodide of potassium and citrate of iron and quinine, and the calabar bean was introduced into the eye every third or fourth day. In two weeks the pain in the head entirely disappeared and has not since returned. The general health improved, and he soon began to have more power over the levator palpebræ and motores oculi of the right eye.

He was discharged on August 7, 1868, being then able to open the right eye almost completely. He could also move the eyeball in any direction though the amount of motion was not quite normal in extent. The pupil remained dilated and insensible to light, and the want of adaptation for near vision of the right eye and the amblyopia were still present.

REMARKS.—We have here, probably, a tumor of benign nature

at the base of the brain pressing on the roots of the three nerves implicated, and causing, in the right eye, dilated pupil, loss of adaptation to near vision, apparent blindness, and impaired movements of the eye-ball. The special sensation of the retina was not affected, and the sensibility of the conjunctiva was normal. At the same focal distance the image seen with the right eye was larger than with the left, hence double vision; but when the adapting power of the right eye was aided by an instrument or by the calabar bean, vision with this eye was as good as with the left, and then vision with both eyes became single. The results obtained with the atropia confirm fully the observations made by Dr. Fleming some years ago, and recorded in his paper "On the Local Action of Atropia on the Eye-ball," in the Edinburgh Medical Journal for March 1863.—*British Medical Journal.*

Diagnosis of Diseases of the Eyes by Chromatoscopy..

ACCORDING to M. Galezowski, a defect in the faculty of distinguishing colors—which has for some time been known as a congenital affection—is produced by some diseases. He has arrived at the following results: 1st. In apoplexy of the retina, the power of distinguishing colors is not impaired unless the effusions be very extensive, or occupy the central parts of the retina. 2 In albuminuric retinitis, partial color-blindness exists only when the affection has reached an advanced stage, and has invaded the macula. 3. In the diabetic retina, there is disturbance of the power of distinguishing colors. 4. In syphilitic retinitis and neuritis, with or without choroiditis, there is very appreciable disturbance of vision as regards green and very often red. 5. Atrophy of the choroid produces color-blindness only when there is disorganization of the layer contiguous to the retina, especially in the region of the macula. 6. In atrophy of the papilla, from the commencement, there is loss of the chromatoscopic power, especially for red and green. 7. The same thing occurs in aleoholic amblyopia; but with this difference, that, in atrophy, the defect is permanent, while in the latter case, it varies from day to day.—*L'Union Médicale.*

QUARTERLY RECORD OF PRACTICAL MEDICINE.

COLLATED BY S. M. BEMISS, M. D., PROF. OF PRACTICE OF MEDICINE, ETC.,
UNIVERSITY OF LOUISIANA.

The Influence of Quinine on the Temperature of the Human Body in Health; By H. C. GELL, M. R. C. S., L. S. A., and SYDNEY RINGER, M. D.

As very much has of late been both written and said of the power which quinine possesses to lower the temperature in most fevers, as pyæmia, typhoid fever, etc., it appears to the authors of this paper to be a question of interest how far this remedy, even in large doses, is capable of affecting the temperature in health. It must be clear to all persons that in disease there are new conditions present, which medicines may be able to control, and hence a drug may possess a very different power over a diseased body than over a healthy one. The conclusions, therefore, obtained from these observations by no means show that the same effects would be obtained in disease. The authors were most careful to conduct their observations with every precaution, to prevent any accidental and preventable circumstances affecting the observations.

The subjects of these investigations were a boy and a girl; the former ten years of age, and the latter thirteen. Both kept their beds the entire day on which the quina was given them; and the thermometer, which was placed in the axilla at nine A. M., was retained there till eight or nine in the evening, the children being fed while lying down in bed. The temperature was read off at least each quarter of an hour by one or other of the observers. The girl was healthy; the boy recently recovered from rheumatic fever, which left behind it a slight mitral regurgitant murmur. His heart beat very quickly—as often as 110 in the minute.

We now give the effects obtained by the quina on the temperature in the following tables:—

On the Boy—

On three occasions he took 10 grs. of quina.

		Fall in temperature	Rise in temperature.
Dec. 7th	... ... ...	None	None
" 10th, morning	...	0.2°	None
" 10th, afternoon	...	None	0.2°

On the Girl—

Dec. 6th	..., 8 grs. ...	0.2°	... ... ...	None
" 7th	... 10 grs. ...	None	gradual to 0.6°	
" 10th	... 12 grs. ...	None	... ... ...	None
" 11th	... 20 grs. ...	1.0°		
" 12th	... 20 grs. ...	0.4°		

From this table it appears quina does possess the power to reduce the bodily temperature; but to do so in any degree, large doses, as of twenty grains, must be given, and even then the depression is only slight, and may not amount to half a degree Fahr.

Next as to the time after the administration at which the depression began, and how long it continued:—

On the Boy—

	Dose	Depression began in	Amount	Lasted
Dec. 10th ...	10 grs. ...	1 h. 45 m. ...	0.2° ...	2 hrs.

On the Girl—

Dec. 6th ...	8 grs. ...	80 min. ...	0.2° ...	30 min.
" 11th ...	20 grs. ...	55 min. ...	1.0° ...	3h.15m
" 12th ...	20 grs. ...	80 min. ...	0.4° ...	45 min.

It thus appears the depression occurs in all instances at about the same time; and this similarity in time make it probable that the slighter falls of 0.2° Fahr. were really due to the quina, and not to accidental causes, as shifting the thermometer or exposure of the body.

The authors think they may conclude from these observations, although they are few in number, that even after large doses of quina, such as twenty grains, the depression of the temperature in health is very slight, and in some instances of very short duration.

Influence on the Pulse.

Boy.—The pulse was always so very rapid that in this respect he can scarcely be said to have been in health. It usually beat 110 in the minute. On the day when two doses were given to him the pulse was not altered in frequency on either occasion; on both, however, the strength of the pulse fell. On another day, as has been mentioned, he took but one dose of ten grains. For fifty minutes afterwards the pulse fell a little in frequency and gained in strength. The fall was from 108 and 112 to 104 and 96. After this it beat 120 in the minute, and at the same time lost in strength.

Girl.—Her pulse beat from 64 to 68 in the minute.

	Dose	Rise began in	Rose to
Dec. 6th ...	8 grs. ...	35 min. ...	72
		(In 55 min. it had risen to 92)	
" 7th ...	10 grs. ...	15 min. (?)	
" 10th ...	12 grs. ...	95 min.	
" 11th ...	20 grs. ...	immediately	
" 12th ...	20 grs. ...	50 min.	

In the last observation the pulse diminished in frequency for about thirty minutes.

The time at which the maximum frequency was reached varied. On Dec. 6th it was reached in 55 min.; on the 7th, in 15 min. (?); on the 10th, in 120.; on the 11th, in 65 min.; on the 12th, in 100 min.

It thus appears that the time the pulse begins to be affected, and the time it is most influenced, is not in these cases related to the size of the dose. As there are so many circumstances which influence absorption from the intestinal canal, this fact will excite no astonishment.

In the case of the girl the pulse fell again on Dec. 7th in 170 min.; on the 11th in 195 min.; on the 12th it did not fall much. On no occasion did it return to the primary frequency it possessed in the morning before the quina was given, but the evening increase over the morning pulse was not greater than occurs in health. On those two occasions on which the temperature was decidedly depressed, the pulse beat at the fastest when the temperature began to fall, and became less frequent again when the depression in the temperature was attained. On every occasion, with the increase in the rapidity of the pulse there occurred also a loss of strength. On two occasions, when the pulse was at its quickest, the pulse became for a short time irregular and intermittent. On other two occasions the pulse, at first after the administration of the quina, beat a little slower, and also grew in strength; but this temporary loss in frequency and gain in strength was soon followed by the opposite circumstances.

Other symptoms noted were—

Noise in the ear: buzzing sounds, and as if bells were ringing.—In the first and third experiments with the lad these did not occur. In the second, he complained of noise, which commenced 35 minutes after the medicine was taken, and lasted about five minutes. The dose on each occasion was ten grs.

With the girl the phenomenon occurred on every occasion. When 8 grs. were taken, it began in 110 min., and lasted 60 min.; 10 grs., began in 120 min., lasted 80 min.; 12 grs., began in 40 min., lasted 185 min.; 20 grs., began in 15 min.; 20 grs., began in 40 min. On some occasions the buzzing sounds discontinued for a time, and then returned. In the first four observations the buzzing noise began a considerable time before the headache or dimness of sight.

Headache.—With the boy, during the first and third experiment no headache occurred. On the second occasion he complained of the pain in 25 minutes after the quina was given him; it lasted about 5 minutes, and then entirely left him.

With the girl, after the administration of 8 grs., headache began in 170 min.; 10 grs., in 175 min.; 12 grs., in 95 min.; 20 grs., in 30 min.; 20 grs., in 15 min.

The pain generally began after the pulse began to be influenced, but it was felt before the pulse had attained its greatest rapidity.

Dimness of Sight.—With the boy, none such occurred on the three occasions of his taking quina.

With the girl, when 8 grs., were taken, none occurred. 10 grs., of left eye only, and began in 177 min., lasted 40 min. 12 grs., none occurred. 8 grs., she complained of dimness, first of

the left eye, and then of the right; in this latter it continued after it had disappeared from the former. 20 grs., appeared in 20 min., first in right, and then in left eye: it lasted 160 min. 20 grs., appeared in 25 min., in right eye only; it lasted 105 min.

It thus seems the dimness of sight appeared much about the same time with the headache.

The quinine sometimes made the children feel a little sick, and twice vomiting occurred in the evening following the administration of quina.—*Lancet.*

[The previous observations contain nothing new to the medical profession of this country. They who originated the practice of administering quinine during the pyæxia of malarial fevers, need not to be told that it lowers temperature so as to hasten, or, in numerous instances, to establish the apyretic stage. It may be true, however, that even among those who seldom fail to avail themselves of this important point of knowledge clinically, some have yet failed to note the difference of effect upon temperature between decided and small doses of quinine. While the physiological effect of large doses is to lower the temperature of the body, it is so little the fact in reference to small doses that where obvious reduction of temperature follows their use, it is more apt to be due to their curative than to their physiological influence. In the former mode of administration we secure both effects, in the latter but one.

Clinically, those effects of quinine are readily prevented by the existence of inflammation, or, by being intercepted by the close sequence of a malarial paroxysm. A healthy laborer aged twenty-five years, suffering under quotidian ague, came under observation at nine o'clock in the forenoon. A chill was due at twelve M. One scruple of quinine in acidulated solution was immediately administered. Temperature 99.6; at ten, 99.4; at eleven, 99.; at one P.M. 98; patient in free perspiration. A second patient received thirty minutes before a chill, one scruple of quinine. It failed to arrest the paroxysm, and at the end of three hours the temperature was increased nearly four degrees. A third patient suffering with acute pleuritis, received three test doses of quinine (each ten grains in solution at intervals of three hours), temperature 100, rose during the day to 103.5.—S. M. B.]

Summary of Direct Symptoms of Separation of Fibrine, Differential and Absolute.

[IN this country, as in Europe, the medical profession views with interest the investigations of Dr. B. W. Richardson in the field of physiology or pathology. He has again directed his attention to the study, to the conditions which determine the separation of fibrine in the organs of circulation, and the symptoms marking such events clinically. We have only space for the latter.—S. M. B.]

I CANNOT express the leading symptoms of separation of fibrine in the heart better than by putting them into one short passage. *They are the symptoms of hemorrhage with the visible loss of blood.* They are—falling temperature, pallid or livid surface, feeble, irregular, or fluttering pulse, muscular prostration, and gasping respiration.

With these facts in the mind, the diagnosis becomes simple; still it must be approached with care. I usually proceed by the exclusion of other causes that might possibly also lead to symptoms of haemorrhage without visible loss of blood.

I ascertain, first, if it be possible to exclude the idea that the collapse is from primary nervous lesion. This is pretty safe. In cases of obstruction from separation of fibrine, there is, as a rule, none of the evidence of special nervous injury. The mind is clear, often painfully clear, nearly to the last; there is no sudden coma, there is no stertor, there is no primary loss of sensibility there is no special paralysis of muscles—there is exhaustion, debility of muscles, but not paralysis. Next, I ask if direct loss of blood can be excluded. In cases of obstruction from separation of fibrine this point is always easily determined, except in such rare instances as the rupture, by a small opening, of an aneurism into the pericardium. Failing the process of exclusion, I try and learn if excessive exudation or excretion of fluid from the body can be excluded, such as choleraic flux. There is no difficulty in the ordinary run of cases in arriving at a correct conclusion on this point.

There is one form of exudation which might lead to error of diagnosis. I refer to effusion of fluid within the pericardial cavity. The phenomena of sudden death from this cause are indeed very close to those of obstruction within the heart. I remember the late Dr. Golding Bird describing a case of this kind, at the Medical Society of London, which struck me at the time as singularly instructive. Such a case might perplex the most careful inquirer, but its extreme rarity places it almost out of the range of practice.

Lastly—still carrying out the process of exclusion—I put it whether any obstruction in the respiration is the primary cause of

the symptoms. On this head the diagnosis is usually very clear. There is always dyspnoea when there is separation of fibrine in the heart, but the dyspnoea is peculiar in that it occurs—except in cases complicated with independent disease of the lung—with open air passages. Examining the lung, we find that there is plenty of free space for breathing, and that the difficulty lies not in air gaining access to blood, but in blood gaining access to air. In young children, in whom the chest is expansible, there is often a confirmatory sign which stamps the fact of concretion on the *right* side; the chest is raised, and there is the resonance due to emphysema. This arises from the destruction of balance between the column of air passing into the lungs and the column of blood passing through the pulmonary artery; the column of air presses with its usual force, the column of blood is reduced, and the air permeates the lung tissue.

The idea of the symptoms as dependent on nervous lesion, haemorrhage, flux, exudation, accumulation of fluid in the pericardium or obstruction of respiration, being then excluded, I proceed next to the direct physical evidences of separation of fibrine. The first of these is a peculiar dyspnoea. I allude now specially to cases in which the obstruction is on the right side. The dyspnoea is most distressing; it admits of no relief. If you ask where is the oppression, the finger is invariably pointed to the heart; if the patient can speak and explain his symptoms, he will describe that he has no difficulty in drawing in breath—that he has no pain, in the ordinary sense of the term, but yet he feels he is sinking from inability to breathe. The dyspnoea lasts to the end, and there is often intense working of the alæ of the nose. The explanation of the dyspnoea is that the blood has been cut off from the air, so that, whatever efforts are made to breathe, there is no efficient result. I have already said that in the young obvious signs of emphysema attend this condition.

There is dyspnoea, again, when the obstruction caused by fibrine is on the left side; but, though severe in character, it is not of the same type as is described above. It is congestive rather in nature, and is referred by the sufferer to the chest generally, not specially to the heart.

From the dyspnoea I turn next to the heart itself. I was at one time of opinion that few, if any, special physical signs of separation of fibrine exist as reliable signs. A larger experience has, to a considerable extent, modified and corrected that opinion, and indeed, during the last five years, I have detected not only fibrine within the heart, but the actual position of the mass in regard to the cavities, with extreme precision. The points I keep in mind are as follows: If, with all the conditions likely to lead to separation, I find the action of the heart feeble and irregular, I make a careful examination with the stethoscope for the two sounds of the heart on the right and on the left sides of the organ. Whatever theory we may adopt as to the cause of the heart's sounds, one thing is certain—that, in health, the tricuspid and mitral valves

act together, and that the first and second sounds respectively are coincident with the simultaneous action of those valves which move together at the same time. When, therefore, in any given case, the action of the valves on one side of the heart is impeded—when, for example, a mass of separated fibrine interferes with the valvular movements—then the sounds produced by the valves on the impeded side will be reduced or even lost altogether. It is possible to detect this. In a case I saw with Mr. Spencer Wells, where fibrine was being laid down on the right side of the heart, this line of diagnosis was so easy that he expressed to me it had only to be practised once to be recognized ever afterwards. Suppose, then, that the separation is on the right side of the heart, there will be feeble or deficient first and second sounds over the line of the right side of the organ—that is to say, in the line of the heart by the sternum. Turning, however, to the left side, both sounds of the heart will be heard.

Supposing the separation of fibrine to be on the left side, these physical signs will be simply reversed—that is to say, the sounds of the organ will be faint or inaudible on the left, audible and distinct on the right side.

One other distinctive point is worthy of attention. When the heart is blocked up with fibrine on the right side, its impulse is reduced, and its action is feeble throughout. When, on the other hand, the organ is blocked up on the left side, the action as a rule is for a long time irregular, tumultuous, struggling.

In some cases there is separation of fibrine on both sides of the heart, in which case the prominent symptoms are those of obstruction in the right cavities.

In concluding the history of symptoms, it is necessary briefly to refer to the condition of the other organs of the body when there is separation of fibrine in the heart. I may state on this point as a general truth, that when there is an obstruction on the right side of the heart from fibrine, there is necessarily congestion of all the organs of the body except the lungs, and that when the separation is on the left side of the heart the congestion extends to the lungs also.

In three cases where the separation of the fibrine was on the right side, and the symptoms were prolonged over many days, I have seen congestion of the veins in the lower half of the body succeeded by exudation of watery fluid, so that the limbs became oedematous.

The diagnosis of separation of fibrine in arteries and veins is in some cases as remarkably clear as it is in other cases profoundly obscure. When from the left side of the heart a portion of fibrine floats away into the arterial system, plugs up a main trunk and acts like a ligature on an artery, the diagnosis is easy enough; or when in a superficial vein small portions of mass can be detected directly as in one of the cases I have related, then again the diagnosis is sufficiently simple; but when a tube or solid cylinder of fibrine is laid down in an artery or vein, and produces

obstruction at the point where it is so laid down, then, although the fact of obstruction may be clear enough, and the position of the obstruction clear enough, the nature of the obstructing substance, and whether it be or be not fibrine, must in many cases be out of calculation. Nothing assists us here except the previous history. Should it be discovered that the patient has recently suffered from acute disease, marked by tendency to separation of fibrine, or that he has been exposed to exhaustion, or shown indications of local stasis of blood, then we may draw an inference as to the possibility of separation of fibrine. There, I fear, we must rest content, hoping that, having discovered so much, we may in course of time discover more.

Up to this point to-day, I have endeavored to depict, free from any theory, the natural history of the separation of fibrine in disease. I have shown the mode in which these separations are laid down—*i.e.*, their mechanical construction. I have shown the conditions of disease in which they are met, and I have tried to point out the phenomena which indicate the fact of separation. But these, after all, are only preliminary studies to a much broader inquiry. I mean—Why in any case is the blood broken up? Why is the once homogeneous fluid ever separated into different parts? In this long glass cylinder I have a column of blood; I direct the magnesium light on this blood, and you will see that the fluid is divided into three layers. The bottom layer, dark and compact, is composed of the blood-corpuscles; the viscid layer in the middle is fibrine; the clear almost transparent layer at the top is the serum. This separation has been induced artificially. At the other end of the table there is a glass basin containing blood which was drawn yesterday by Mr. Spencer Wells from a patient suffering from peritonitis after ovariotomy. You will see here the blood-corpuscles at the lower part, an immense layer of purely separated fibrine above, and over and around the fibrin a thin serum. In this instance the separation is natural. We look at the two specimens, and we say again, Why, in either case, is the homogeneous fluid broken up? It is too late in this lecture to enter on the question, but I may state, in conclusion three basic facts, because they are illustrated in the specimens before us: 1. That whenever fibrine separates from the rest of the blood, as in this specimen of blood drawn from the patient with peritonitis, there is always a reduction in amount of blood-corpuscle. 2. That, under the same circumstances, there is always a low specific gravity of serum. In the present case the specific gravity of the serum is 1023 at 60° Fahr. 3. That the large mass of solid fibrine, so called, is made up of not less than from 95 to 97 per cent. of water.—*London Medical Times & Gazette.*

Treatment of Chronic Dysentery and Diarrhaea. By E. S. FRAZER,
M. D., St. Louis.

DR. FRAZER'S method of treating chronic dysentery is well worth the space we afford it.

I commence the treatment by giving two large tablespoonfuls of the decoction of simaruba every four hours and one large tablespoonful of Hope's mixture between each dose of the simaruba, or, in other words, I give the two preparations named above in the doses named every two hours—taking the same medicine only every four hours. During the administration of these remedies, and for some weeks after their discontinuance, I give an infusion of frostwort—a medium-sized wineglassful of the tea every two or three hours. I prepare the tea by adding one quart of boiling water to one ounce of the frostwort.

I persevere in the above treatment until the bowels are corrected, when, if the patient be anemic, as usually happens in such cases, I give in connection with the frostwort tea, the syr. proto. nitrate of iron twenty drops three or four times a day for two or three weeks.

During the progress of the case the patient should be restricted to a milk diet; indeed, in the more aggravated cases, I do not permit them to use any other diet whatever, not even a crumb of bread. I deem it of the utmost importance that the bowels remain perfectly at rest.

Below I give the recipes as prepared for me by Mr. Eugene S. Massot, druggist at corner of Spruce and Fourth streets. I consider it of the greatest importance, in the treatment of the above diseases, that the medicines should be fresh and pure, and prepared with the greatest care and circumspection.

The following is my formulæ for making the Compound Infusion of Simaruba:

R.	Simaruba Bark (bruised)	:	:	:	3vj
	Boiling water, q. s. to make	3	12	of the infusion;	
	strain and add Holland Gin,	:	:	:	3iv
	Loaf Sugar,	:	:	:	3ij
	Bottle for use.				

I also append the following account of the celebrated Hope's nitrous acid mixture, taken from the Edinburgh Medical and Surgical Journal, January, 1824, entitled: "Observations on the powerful effects of a mixture containing Nitrous Acid and Opium in curing Dysentery, Cholera and Diarrhaea, by Thomas Hope, Esq., Surgeon, Chatham :" More than 26 years ago, when attending a case of dysentery, in which the usual remedies had been prescribed in vain, the patient determined on his own accord to take a medicine I had sent for his nurse, who was worn out with attention to her charge, and complained of excessive thirst. It occurred to give an acid to alleviate her complaint, and in order to obviate

any unpleasant effects to join opium with it. I accordingly sent the following :

R.	Acid Nitrosi	·	·	·	·	·	·	·	3ii
	Ext. Opii,	·	·	·	·	·	·	·	grs. ij
	Aqua,	·	·	·	·	·	·	·	3ij M.
	Cap. Cochl minus ter quarterve in die.								

And the patient with dysentery having taken some of this medicine the effect produced was so great that it no less surprised him, who by a continuance of it recovered, than it did myself.

The form of the medicine, as I used it in all the cases referred to, is as follows :

R.	Acid Nitrosi,	·	·	·	·	·	·	·	3i
	Mist. Camphor,	·	·	·	·	·	·	·	3vij
	Misce et adde								
	Tinct Opii,	·	·	·	·	·	·	·	gtt xl

Sig: One-fourth part to be taken every three or four hours.

In chronic Dysentery the dose of two ounces, three times a day is quite sufficient. The remedy is grateful to the taste, abates thirst, soon removes the intensity of pain, and procures, in general a speedy and permanent relief. No previous preparation is required for taking it, nor any other care whilst taking it, except the keeping of the hands and feet warm, preserving the body as much as possible from exposure to extreme cold or currents of air, and making use of warm barley-water or thin gruel and a diet of sago or tapioca. It is necessary to mention that the remedy, the good effects of which I now detail, is nitrous acid, with opium—not nitric acid, with opium. I have not found nitric acid, with opium, to produce any good effect; for, having expended my nitrous acid, I sent to a chemist for a fresh supply, who, by mistake, sent me nitric acid, which I used merely by way of trial, but I found it not in any way beneficial to my patients.

In conclusion, I can say to my professional brethren, that no treatment by me, or under my observation, approximates the success of this in all the purely chronic cases of dysentery and diarrhoea.—*St. Louis Medical Reporter.*

Misplacement of the Spleen in Connexion with the Hæmorrhagic Diathesis: By HENRY BUSS, M. D., M. R. C. S., etc.

INSTANCES of congenital misplacement of the heart and kidneys, though by no means common, have occasionally been placed on record; but misplacements of the thoracic and abdominal viscera resulting from disease are very frequently met with. The follow-

ing case of spleen congenitally misplaced, if not unique, is at any rate sufficiently rare to form my excuse for intruding it upon the profession.

A pale-faced, delicate young man, of about twenty years of age and middle stature, with dark hair and white lips, disposition quiet yet cheerful, fonder of home recreations than of the more energetic enjoyments of robust youth, applied to me, about a twelvemonth before the occurrence of the particular malady which ended in his death, for severe dental haemorrhage brought on after the extraction of a tooth. He was much subject to tooth-ache, and on this occasion, the pain being intolerable, he, with some reluctance, applied to a dentist who extracted the first left upper molar. The dentist, being unable to arrest the profuse haemorrhage, advised him to apply to a surgeon. I plugged the cavity with lint moistened with the sesquichloride of iron, and afterwards with a pledge of dry lint, and advised him to give the jaw rest. He passed a quiet night, but the next morning the bleeding again came on during the act of eating. This time I applied the actual cautery and plugged it again. This succeeded till the evening, when the blood once more burst forth, and the mother, taking alarm at the pallor of the patient, put him into a cab and drove him to the London Hospital. He was at once taken in, and I understand that the surgeon then in charge had great difficulty in putting a stop to the haemorrhage. He accomplished it, however, by dint of plugging the cavity, and maintaining pressure thereon by tying up the lower jaw. By these means, and by full doses of quinine and steel, the young man was enabled to resume his employment as a clerk within a week.

From this time he went on for about a twelvemonth without any recurrence of haemorrhage.

One Saturday, when he was out collecting, a pain suddenly seized him in the left groin—a pain which he described as being so severe as almost to prevent his returning home. He took to his bed, and there remained till the evening of the following Monday, when I was called in to see him. In the meantime his mother had essayed to relieve his sufferings by domestic remedies. I found him in bed with his legs drawn up; very anxious expression of countenance; tongue coated and white; pulse full and quick; bowels confined; urine scanty and dark; skin dry; pain great, and extreme on pressure in the left iliac fossa, where a tumor could be felt.

Here, then, was evidence of acute inflammation persisting for upwards of forty-eight hours, together with grave suspicion of local mischief. To keep the inflammatory symptoms in check, the liq. am. acet., with sp. aeth. nit., was administered, with frequent small doses of laudanum to allay the pain. Local bleeding was inadmissible because of his haemorrhagic diathesis. Accordingly, a strong turpentine stupe was applied to the seat of pain.

On the following day (Tuesday) his symptoms were no better,

and sickness had supervened. I now called in consultation the late Dr. Haneorn. The saline was made effervescent, a blister was applied—the turpentine stupe having failed to relieve the urgent distress—and an enema was administered. But little relief was obtained, and the powers were gradually sinking. Hydrocyanic acid, stimulants, and other remedies and applications, all failed to relieve the most obstinate symptoms.

The patient was still lower on the next day (Wednesday, the fifth of the attack). The vomiting and constipation continued obstinate. Enemas quite failed to relieve the bowels. Diffusible stimulants frequently administered were unavailing to sustain the action of the heart and lungs, and the patient sank early on the sixth morning from the commencement of the attack.

Now, the points of interest to ascertain were the precise nature of the tumor in left iliac fossa, and the probable causes which led to his death.

A post mortem was allowed and made about twenty-four hours after death. The body was moderately well nourished, though anaemic; the rigor mortis inconsiderable; the thoracic viscera, though somewhat pale and flabby, were sufficiently healthy *per se* to have kept the machinery at work. On opening the abdomen, the intestines were found surrounded by a large quantity of grumous blood. The discovery of course concentrated the interest upon the particular spot whence the haemorrhage had risen. Excepting a general pallor pervading all the abdominal viscera, there was no other well-marked abnormality. The liver, kidneys, pancreas, and intestinal tract were separately examined, but no rupture was detectable. On searching for the spleen in left hypochondrium, it could not be met with, bat, pursuing the investigation, it was found resting on the internal iliaceus muscle in the left iliac fossa. It was quite double the natural size, was soft, dark, and ruptured at its internal border. Here, then, was the explanation. The misplaced spleen had become, from some cause, congested. This state had gone on to inflammation, probably on the Saturday when he experienced the sudden pain. The swollen and sensitive organ communicated the sensation of a tumor in the left iliac region, rendering its diagnosis so obscure. On the rupture of the spleen, copious effusion of blood took place into the peritoneal cavity, thus changing the acute inflammatory symptoms into those of depression of the vital powers, terminating in speedy death.

We thus make out that the proximate cause of death in this case was the collapse consequent on the haemorrhage into the peritoneal cavity, and that the ultimate cause was the acute inflammation of the misplaced spleen. Now, it is a very interesting point to determine what, if any, connexion may exist between such a malposition of the spleen and the eminently haemorrhagic diathesis which we have traced in the present instance.

The further history of this young man shows that he was the fifth child; that his father died of consumption when at the age

of thirty-one, and while our patient G. B. was only one year old. Of the four other children, two died early of well-marked consumption, another of some cachectic malady, and the remaining one fell a victim to small-pox. The mother, who is alive and healthy, had early remarked that her son George presented great difficulties in suppressing bleeding whenever it occurred to him—that in him a slight cut or wound was the cause of unusual anxiety to her. On one occasion his gum bled, and she took him to a surgeon, who, unable to arrest the haemorrhage, purposely extracted the nearest tooth that he might the better plug the spot, and thus succeeded in doing so, but not without a very great deal of trouble.

This, then, is a typical example of well-marked haemorrhagic diathesis. But what, if any relation does this bear to the mal-position of the spleen?

His history failed to afford evidence that he had ever suffered from ague, intermitting fever, or splenitis. He was the only surviving child, and his mother, an intelligent woman, would have recollectcd any illness that could have supplied evidence of these maladies. We may therefore conclude that his peculiar diathesis was not the product of ague, or of any inflammatory state of the spleen.

Was it congenital? We have already traced his pedigree up to a consumptive father. We have ascertained that his peculiar diathesis was declared from his early childhood, and cropped out occasionally till the period of his death. The inference is therefore forced upon us that his tendency to bleed was congenital; and that, although the father's defects took in him the form of tuberculosis, this inherited paternal dyscrasia assumed the character of haemorrhage in the son.

Having brought the case up to this stage, the other remaining important point to canvass is whether the congenital haemorrhage was in any way dependent upon the malposition of the spleen—seeing that that organ had not previously been the subject of disease.

I have had no previous experience of a misplaced spleen; nor do I recollect ever to have met with such a case recorded. It may be simply a coincidence without any necessary relationship.

Dr. Tanner, in a very able article on affections of the spleen, remarks "that sufferers from enlarged spleen are frequently the subjects of haemorrhage." Dr. Hooper says "that in enlarged spleen there is a tendency to haemorrhage, debility, and scurvy." Dr. Gregory declares "that amongst other diseases of this organ is that of softening. Its texture then gives way like a loose coagulum of blood. Under these circumstances the peritoneal coat is very easily ruptured by a blow or fall, and a fatal haemorrhage ends it."

Several other medical authors to whose writings on the spleen I have referred, are either silent on this particular point, or merely reiterate in substance what I have already quoted.

Whether, then, there is any relationship between the haemor-

rhagie diathesis and a congenitally misplaced spleen is still a problem unsolved. Should the experience of others decide upon its being a mere coincidence, still its occurrence in company with so well-marked a diathesis to bleed has added very much to the interest of the case.—*Medical Times and Gazette.*

QUARTERLY RECORD OF OBSTETRICAL SCIENCE.

COLLATED BY JOSEPH HOLT, M. D.

A Case of Ovarian Cystic Tumor: By JOHN MILLAR, M. D., F. R. C. S. E. Read before the Obstetrical Society, 11th March, 1868, and Reprinted from the Edinburgh Medical Journal for November, 1868.

MRS. S., a widow, æt. 48, and the mother of seven children, who had up to the month of August 1866 enjoyed good health, at that time came under my notice at the Carrubber's Close Dispensary, complaining of obscure symptoms of weight and oppression in the pelvic region, with an evident loss of flesh and general strength. At first tonics were freely used, with gentle laxatives to overcome the habitual constipation; but under the use of such remedies she made little progress—in fact, the former pelvic symptoms increased, together with a considerable difficulty in making water. On examination, per vaginum and rectum, a small defined tuberose tumor was felt in the vicinity of the left ovary. This speedily enlarged, so that in the month of November it had reached the abdomen, with a manifest remission in the bearing-down symptoms, with this difference also that there was considerable difficulty in retaining water for any length of time, compared with the pain she at first experienced in making it; but the constipation still required the use of opening medicines. On examining the abdomen at this stage by means of percussion, the tumor was discovered in the left iliac fossa, of a tuberose character, but at this time no fluctuation could be distinguished. The patient's general health began now to improve somewhat under the use of tonics and the iodide or potassium—which latter remedy, for the time being, retarded the growth of the tumor. The patient was enjoined to keep in the recumbent position, and to avoid all exercise and exposure to cold; but disregarding these instructions, she in the beginning of January 1867 suffered a relapse, in consequence of inattention to these orders. She now complained of a deep-seated pain in the left iliac fossa, together with general feverishness and irritability—the pulse rose to 110,

with furred tongue and hot dry skin ; but these symptoms early succumbed to the usual remedies, leaving her, however, exceedingly weak and prostrate. A change, however, came over the condition of the tumor. During the month of December, in consequence of keeping the recumbent position, it had caused her very little uneasiness, the most prominent symptom being the difficulty of retaining water ; but on the accession of these febrile symptoms, the tumor increased considerably in size, and could be distinctly felt in the left inguinal and part of the left lumbar regions. Percussion and palpation now distinctly indicated its fluid nature, and enabled us to distinguish a division of the tumor into two parts—an upper smaller and a lower larger part. The difficulty of making water again returned, so that Mr. Emerson, my assistant in the case, to whom I am indebted for some valuable notes, had occasion frequently to pass the catheter in order to relieve the patient. Diuretics were freely given as well as gentle laxatives, but, notwithstanding, the tumor rapidly increased in size, so that by the end of January 1867, it occupied part of the hypogastric and umbilical regions, extending as far also as the epigastric. The patient now complained extremely of distressing dyspnoea ; her rest at night was completely broken ; having no appetite, it was with difficulty that she could be persuaded to take nourishment, so that it was evident that some measures would be required to relieve the patient before her strength completely gave way.

Before arrangements had been made for a consultation with any one, I was sent for on the night of the 1st of February, and finding that her pulse was becoming weak and fluttering, I determined at once to tap the patient, as the speediest means of affording relief. Accordingly, I introduced the trocar into the lower and larger part of the tumor, midway between the umbilicus and pubes, a little to the left of the mesial line, and removed about 80 oz. of a dark-colored serous fluid. Immediately after the operation, the relief the patient experienced was very considerable, at once relieving the dyspnoea and oppression, which in her weak state were of a serious character. The outline of the tumor also experienced a considerable change, as no longer the two divisions could be defined, the lower vesicle of the cyst having evidently collapsed (if I may use the term) after the removal of the serous fluid, but the upper could still be distinguished lying in the left iliac fossa.

About two days after the operation, however, the patient complained of severe pain in the region of the tumor of a very acute character, precluding the possibility of rest and sleep. She was therefore ordered a grain of opium every six hours, which so far removed the severe pain as to allow her to obtain snatches of quiet and rest. The pain, however, did not disappear ; and as the patient complained of considerable sickness, accompanied with vomiting, a consultation with Sir James Simpson was agreed on. He saw the patient first on the 6th of February 1867, and

after a careful examination of the abdomen and the state of the patient, Sir James Simpson recommended the trial of the bromide of potassium in small doses, five grains three times a day, with ice for the severe sickness and vomiting. Hot poultices, sprinkled with turpentine, were constantly applied to the left side, which was the seat of pain. Under the use of the bromide of potassium, the pain gradually diminished, but with the absence of pain there seemed to be a tendency to a return in size of the tumor, as some fulness was evident on examination in the left side.

Anticipating a return of the serous fluid, Sir James Simpson, the next time he saw the patient, on the 20th of February, recommended the dose of the bromide of potassium to be doubled, which it accordingly was to ten grains three times a day, with very beneficial results, as the tumor within a few weeks became palpably diminished in bulk. During this period the patient perspired very copiously, and passed a large quantity of dark-colored urine. This improvement gradually went on during February and March, until in the beginning of April, when she was prostrated by an acute attack of gastritis, brought on by indulging in a glass of porter—a beverage so long forbidden, that she could not resist the temptation with her returning strength to partake of it. Under the use of appropriate remedies the attack subsided, but became prolonged into a chronic condition, due to her constitutional weakness, during which time she had to be supported principally by nourishing enemata. As the use of the bromide of potassium was during this attack of gastritis suspended, the tumor, which had been reduced to a very small compass, gradually resumed its former size and bulk, so that in the latter end of May she presented very similar symptoms to those she experienced in January—so much so that I was under the impression it would be again necessary to tap her. However, I again consulted Sir James Simpson, who recommended the renewal of the bromide of potassium in larger doses than before, so that she now received fifteen grains three times a day with marked benefit; and not only so, she had less repugnance to the medicine than formerly, as she insisted that the nausea, of which she had reason to complain so much, was due to this medicine, and was therefore very unwilling to renew it; but with a larger dose she experienced none of the former sickening effects. I may here mention that a similar thing happened in another of my patients, who for nervous debility was ordered the bromide of potassium, and who under small doses took a great repugnance to the medicine; but on its being renewed in larger doses, she experienced none of the sickness and nausea with which she was previously troubled.

Under the continuous use of the bromide of potassium the tumor gradually diminished in size; and, wishing to mark the progress of the diminution, the patient was desired to measure the width of the abdomen on a level with the umbilicus, when, within three weeks, from the last week of May to the third week of June, the decrease was from 48 inches to 33 inches. At the same time her

general health greatly improved, the extreme tenderness of the abdomen which followed the acute pain she suffered in the beginning of the year also entirely disappeared; so much so that she was able to sit up in bed, and bear the pressure of her stays. The difficulty in making as well as retaining her water, entirely disappeared; and it was only on examination, per rectum, that a small excrescence on the left ovary could be felt—the shrivelled remains of the ovarian cysts. In the beginning of July, the patient was able to leave her couch, and by the end of that month she was sufficiently strong to go out and undergo without fatigue a moderate amount of exercise. Within a short time afterwards she returned to her usual occupation and domestic duties, and since then has, with the exception of one or two attacks of bronchitis, enjoyed pretty good health. At present her health is not very robust, yet she is able to go about her usual avocations; and with the exception of now and then feeling a sense of weakness in the left side, no traces remain of her former complaint.

Now this case, of which a brief abstract has just been given, is interesting both from its intrinsic character as a pathognomonic case of ovarian cystic disease, as well as showing the therapeutic influence of the bromide of potassium in absorbing and removing by its deobstruent character the fluid contents of an ovarian cyst. The time was when many eminent men in our profession held that no absorption could take place in the interior of an ovarian cyst; but, among the many powerful actions of the bromide of potassium, this case evidently proves that it has a beneficial action on cystic disease of the ovaries in arresting as well as dissipating the fluid contents of an ovarian cyst. It ought here to be mentioned, that the patient has never ceased taking the bromide of potassium in ten-grain doses, feeling that she would rather dispense with her ordinary meals than give up the medicine. That the operation of paracentesis seldom effects of itself anything more than a temporary relief, is now very generally held, and that at best its influence for good is merely of a temporary nature. The more extended use of the bromide of potassium in such cases will have a decided influence in reducing the necessity for the operation of paracentesis, as well as of the major operation of extirpation, provided that in the outset the remedy be cautiously and persistently used.

On a New Duck-bill Speculum, for Private Practice: By J. C. NOTT, M. D., New York.

THE fact that every new month brings forth a new vaginal speculum, is sufficient evidence that all the indications have not yet been fully met. I here present one more to the profession, which

acts on a somewhat different principle from those in use; and although it may be modified in shape to suit the fancy of other practitioners, I feel much confidence that the principle will hold good.

This speculum—at least in my hands—has answered far better than any I have yet seen, the requirements of the *private practitioner*, who is compelled to go from house to house to examine his patients, where he cannot command trained assistants, a suitable table, a horizontal light, etc., but is obliged to take things as he happens to find them. I have for some months been working with this speculum constantly and to my entire satisfaction. Like every other new instrument, it requires a little practice to become familiar with its manipulation. The makers of this instrument are Messrs. Geo. Tiemann & Co., Chatham street, New York, and to their ingenuity and patience am I indebted for success. I could only suggest, but it required the ingenuity of a thorough mechanic to carry out the principles I had in view.

No one who has worked much in uterine surgery, and tested fairly the lever speculum of Sims, and the various forms of valvular and cylindrical specula, can deny that the former possesses important advantages over all others. I believe I may safely say that there is scarcely anything that can be done with others, that cannot be equally well done with the instrument of Sims, while the latter has many applications peculiar to itself.

The leading advantages of Sims speculum are briefly these: It enables us to explore the vagina more satisfactorily than any other, as it covers but a small portion of the canal, and its position is quickly changed. Where the vagina itself is diseased, or sensitive, it is greatly preferable, as it presses on but one side, and leaves the atmospheric pressure to complete the dilatation. During operations the position and direction of the instrument can be changed by the assistant, at a moment's warning, to suit the wishes of the operator. It obstructs less the view and manipulations than any other specimen heretofore used. Not putting the vagina on the stretch *longitudinally*, it allows the uterus, by slight traction with the tenaculum, to be brought near the vulva, and thereby greatly facilitates cauterizing, probing, and all cutting operations on the cervix, introduction of tents, etc. Nothing need be said about its triumph in vesico-vaginal fistula.

It would be a waste of time to enumerate the objections, now so generally admitted, which may be made against the cylindrical and common valvular specula; suffice it to say that their utility is limited to but few conditions—that they act on principles the reverse of the instrument of Sims—they dilate the vagina simply by mechanical force—they cover the whole vagina from view—they *push the uterus away* from the operator, and are of little service beyond affording an excellent view of the os and lips of the uterus, and of allowing the easy application of caustics or other

remedies to these parts. Where flexions or versions of the uterus exist, they do not even admit the introduction of a sound without unjustifiable violence, and from the length and narrowness of the channel through which we hope to manipulate, they are utterly useless in all cutting operations. The ingenious instruments of Drs. Emmet, T. Gaillard, Thomas, and Bozeman, have been fully described by their respective inventors, and any fair comments upon their respective and acknowledged merits would far transcend the limits here allowed me. I would remark, in passing, that I do not think either one well suited to the wants of the *private practitioner*. To get at the cervix uteri they all require either the semi-prone position or that on the knees; they consequently require an elevated table, and a light horizontal with the table, to give a good view, all of which conditions are inconvenient in private houses. Dr. Thomas' modification of Sims' speculum requires to be held by one hand, and therefore leaves but one free. Dr. Emmet (whose operations are all performed in hospitals, private or public) frankly said to me that Sims' speculum is superior to all others, and that he rarely uses any other. His object in contriving a new instrument was not for his own convenience, but for that of others; and the profession is certainly greatly indebted to him for his success. The operation of vesico-vaginal fistula, and most other vaginal operations, can be well performed with his instrument. The instrument of Dr. Bozeman is peculiarly adapted to the operation of fistula as I understand it, and the modifications of Sims' speculum, and that of Cusco by Dr. Thomas, though excellent instruments for most purposes, are wholly inapplicable to the operation of fistula. But there are insuperable objections to the speculum of Sims in *private practice*. It requires, for the simplest manipulations, a table from two and a half to three feet high, and a horizontal light; it requires a trained assistant to manage it; and the patient must be placed in the semi-prone position, with the head lower than the hips, which is very constrained and fatiguing if long continued.

We might just as well attempt to popularize the fracture beds of Jenks or Daniels, as the speculum of Sims; and from its bulk, costliness, and liability to be broken in carrying it about, the instrument of Dr. Emmet, with all its merit, is not, I fear, destined to come into general use.

I may remark, by way of parenthesis, that the operation of vesico-vaginal fistula has long since ceased to be one of the wonders of the world. The rules for its execution are so well defined, and the operation now so simple that any one of ordinary dexterity can perform it. In this operation assistants are indispensable, and I do not see that it really requires any more perfect instrument than that of Sims, unless in a few exceptional cases—perhaps in some very fat women. Dr. Emmet, with Sims' speculum, and a few simple instruments, performs it two or three times a week; and I have repeatedly seen him do it, as also his operation for procidentia, with the utmost dexterity and dispatch.

Like lithotomy and ovariotomy, these operations are comparatively few, and rarely fall into the hands of any but specialists. *What most practitioners want is a speculum for every-day use*—one which will enable us to explore readily the vagina and uterus—to introduce a sound—to introduce tents—to split or amputate the cervix with scissors, etc., all of which I have been doing for months past with my speculum, and with quite as much and more ease than I could with that of Sims.

In very large fat women, from the disposition of the vagina and bladder to crowd in, in front of the os uteri, my instrument (as that of Sims and all others that I have seen used) meets with difficulty; but these exceptional cases are few and far between. Dr. Bozeman claims to have overcome this difficulty in the operation for fistula, and his experience gives full weight to his assertion.

The following are the advantages I claim for the instrument I introduce to the profession:—

1. No instrument hitherto devised can be more easy to introduce.

2. It can be equally well used in the semi-prone position or on the back.

3. While elevating or depressing the perineum, its feet are so constructed as to expand the *ostium vaginalæ* to any desired extent.

4. It is perfectly self-retaining, without any arrangement external to the vagina.

5. In the semi-prone position it has the same advantage of atmospheric pressure as the lever speculum of Sims, and when the patient is on the back, by elevating the hips with a cushion or pillow, you have the same advantage of atmospheric pressure.

6. I use the instrument almost entirely with the patient on the back, because the position is more comfortable; because I can do everything I wish to do with more facility; and because the light from any window is more easily commanded. The concave surface of the speculum looking upwards, catches and throws the light fully on the anterior wall of the vagina and os uteri.

7. For all ordinary manipulations, where no cutting is required, instead of a table, any common bedstead or couch will command the light sufficiently from almost any window to give a good view. Baker Brown, in his operations for vesico-vaginal fistula, while using Sims' speculum, places the patient in the lithotomy position.

8. Like Sims' speculum, mine does not stretch the vagina longitudinally, and therefore allows the os uteri to be drawn down with a tenaculum near the vulva.

9. The anterior wall of the vagina being left free, more space is afforded for operations.

10. With this speculum there are few operations that cannot be easily performed without an assistant.

I have also added, in some of the instruments, a small tenaculum, two inches long, with a little chain, any link of which may

be made to catch on to a knob at the heel of the instrument. With a pair of forceps the tenaculum is fastened into the anterior lip of the uterus, and then drawn out and fixed at any point we desire.

I should remark that I have not yet tried this instrument in a case of vesico-vaginal fistula, and do not think it would answer well in any but small openings. By shortening the feet of the instrument, however, they would be out of the way, and the instrument would still be self-retaining. The feet need only be long enough to curve around the rami of the pubes, and thus not press upon or stretch the bladder; with this alteration I see no reason why it should not answer well for vesico-vaginal fistula.

It may not be amiss to say a few words in favor of a simple contrivance for office use (or elsewhere), to answer the purpose of an operating table, or expensive chair. It is simply a small cot, or large camp stool, covered with strong sail-cloth, or, what is better, raw hide or stout leather, these being more durable. Have the framework made exactly like a cot; but the horizontal bars, to which the canvas is tacked, only three and a half feet long. The sacking should extend three feet from one extremity, and within six inches of the other extremity, so as to leave the bars extending six inches beyond the edge of the canvas at one end. When the canvas is tacked on, the cot should be but two feet wide, and the height about two feet eight inches. The free ends of the bars should each have three perpendicular auger-holes bored in it, into any one of which a peg of wood, four or five inches long, may be inserted. The woman is then laid on the cot on her back, with a foot resting against a peg on each side, and the nates drawn down to the edge of the canvas. She is thus placed and comfortably maintained in the lithotomy position, which is the best for nearly all manipulations. If preferred, she can equally well be placed on the side, or in the semi-prone position.

The advantages of this cot are, that it is cheap; it answers all the purposes of the most complicated and expensive operating table; it can be folded up, set aside, or taken up by a boy and carried about from place to place when needed, and is more comfortable to lie on than a table.

Directions for Using the Speculum.—The depressor being extracted, and the instrument closed, the palm of the hand is placed over the outer opening of the instrument; the end of the thumb is placed on the back of the duck-bill, and the index and middle fingers curved over the heels of the feet—the blades are all thus firmly compressed together. Pass the instrument into the vagina as far as it will go, the end of the duck-bill gliding along the posterior wall of the vagina, and the curved feet well within the arch of the pubes. Then turn the button on the screw until the perineum is pushed sufficiently out of the way, and the ostium vaginalis is well opened. In women who have had children, the instrument may be slowly expanded nearly or quite to its full

limits. Then, if the os uteri is not in view, push the end of depressor forward, and sweep it around to the central line to hold up the wall of vagina, and bring the os uteri in view. This is the only difficult point to the novice, but is easily overcome by a little practice. In some cases, as with Sims' speculum, a small tenaculum, hooked in the os uteri, will facilitate the view by bringing the uterus lower and changing its axis.

In fat women the same difficulty exists with this as with all other specula, in probing and in all cutting operations. I have not used this instrument with the patient on the knees, but the principle and action here would be the same as the lever of Sims; the action of the air would be the same.

Caution.—Nitrate of silver and other chemicals act on plated instruments, and when I apply them to the os uteri, I always stuff a little cotton between the uterus and instrument to protect it.

The following wood-cuts represent the instrument with the feet upwards, the attitude in which I most frequently use it.

Fig. 1. The instrument as expanded, after being introduced.

Fig. 2. The instrument closed, preparatory to introduction.

FIG. 1.

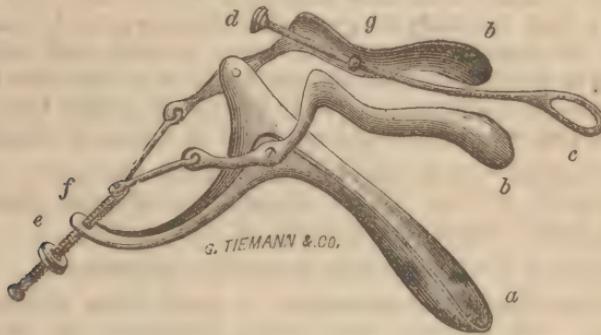
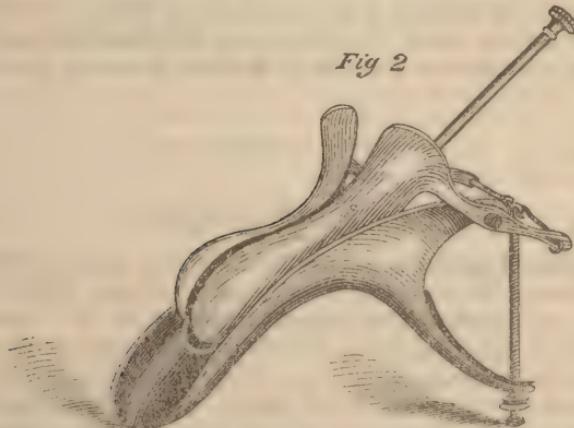


Fig 2



If the reader will turn the drawings upside down, he will

probably form a better idea of the shape and construction of the instrument. The two feet *b*, *b* are intended to stand firmly on the rami of the pubes, while by turning the button on the screw, the duck-bill or lever recedes and carries with it the perineum.

Fig. 1 represents the instrument with the feet upwards, as it is used when the patient lies on her back.

a, the duck-bill, corresponds with the Sims' lever, and acts on the perineum in the same way.

b, *b* are the two feet, which rest on the rami of pubes, and are so shaped as to curve smoothly around the bones, and not to press on their sharp edges.

c, is the depressor (or elevator, according to the position of the patient), which may be pushed forwards or drawn backwards, and swings around from side to side, like an oar on a pivot, so as to press out of the way the anterior wall of the vagina. This is a very convenient appendage when the patient is on the back, but may be dispensed with when the instrument is used in the semi-prone position. It is easily slipped out by unscrewing the little button, *d*, on the end.

I should remark that this depressor is the only part of the instrument that is likely to give the inexperienced operator any trouble. It should not be too much curved, and when pushed forwards to its full extent, should stand in a line with the axes of the feet of the instrument. It is malleable, easily bent, and very little practice will enable the operator to shape it properly.

e, is the bottom which plays up and down the screw, expands or contracts all the blades simultaneously, and fixes them at any point to suit the capacity of the vagina.

f, is the screw which opens or closes the instrument.

After the operator has secured a good view of the os uteri, should he wish to draw the uterus nearer to the vulva, this is easily effected by catching the anterior lip with a tenaculum, and drawing it down, while the depressor is retracted and taken out of the way.—*American Journal of Medical Sciences*, October '68

Orariotomy : By DR. ATLEE, Philadelphia.

MAY 1st, 1868, I went to the Clifford House, corner of Thirty-first and Broadway, New York City, and met Drs. Elliott and Van Buren, in consultation, in the case of Mrs. S. W. H. She is thirty-four years old, has had three children, has always been regular until recently, and now there is a tendency to hemorrhage. The disease has existed about three years, sometimes diminishing in size and again increasing. She is larger than a woman at full period, irregular in shape, with a sulcus running from the left

hypochondrium towards the right iliac region, and this syleus is resisting like a ridge, and causes the appearance of two cysts. In the lower part of the abdomen, on the right side, there are solid deposits, which reach the linea alba. Fluctuation is distinct every where, even across the supposed septum, so as to leave that part doubtful. The pelvis is not entirely free, and the uterus is congested and throwing off an unhealthy secretion. The sound enters one inch. Dr. Van Buren says her pulse has been as high as 140, and never under 100. It is quite compressible, but better now than heretofore. Tongue has been red and patchy, now better. The veins on the right side of the abdomen were engorged and large.

It was agreed first to tap the patient; both for the purpose of completing the diagnosis, and also to give her an opportunity to rally and gain strength. Accordingly I passed a large trocar into the left of the linea alba, and drew off twenty-eight pints of very dark-colored fluid, somewhat opaque and adhesive to the feel, and which coagulated by heat. In the tub it looked almost black. Several large plugs ofropy tissue plugged up the canula towards the last, which had to be removed by means of the sound before we could empty the whole cyst. There was but one cyst, and after the abdomen was emptied a polycystic mass could be readily felt and grasped in the hand, in the lower right side of the abdomen. This was flat and as large as a saucer. She bore the tapping well. The fluid measured twenty-eight pints.

June 17th, 1868, Drs. George Maulsby, U. S. N., La Pierre House; J. L. Atlee, Lancaster; W. F. Atlee, Burpee, Keen, Mears, Cohen, Landis, of Philadelphia; and Thomas P. Christ, of Chester, Delaware county, Pennsylvania, and Mr. Wilson, student, being present, I placed the patient under the influence of chloroform, (by the hands of Dr. Christ,) and selecting Drs. J. L. Atlee and Mears as my assistants, I made an incision in the linea alba, about two or three inches in length, until I arrived at the cyst, which I opened, and ran its contents through my silk tube into the tub under the table, to the amount of several gallons (three.) Its color was a deep olive green, semi-translucent and thick, and towards the last loaded with heavy flakes of lymph.

Upon passing my finger over the surface of the tumor, I found it slightly adherent to the walls of the abdomen. Immediately upon making an opening into the peritoneal cavity, several hydatids protruded, and which I picked away. I now enlarged the incision upwards and downwards, altogether to the extent of five or six inches, and separated all the parietal adhesions of the tumor; but the omentum, thickened and highly vascular, with immense and engorged vessels, was spread over the sac like a fan, and attached to it by strong adhesions, which were separated and the detached portion placed in the hands of Dr. Mears, so as to control the haemorrhage. I now endeavored to drag out the sac, but found it still adhered to the sides of the abdomen and to the pel-

vis. Adhesions were finally overcome, and the whole mass turned out, and yet there was found to be a very extensive attachment to the whole front of the pelvis, extending clear around to the right acetabulum. The attachment in front seemed to be such a mass, that I suspected the bladder to be involved; and to decide this, I introduced the catheter, and found that the bladder was involved in the left border of the pedicle.

I now separated the upper portion of the attachment of the bladder, from the pedicle, so as to enable me to place the clamp, and then crowding the large, thick, wide mass of attachment into as small a space as possible, and, throwing around it a ligature to compress it still more, I applied the clamp to this constricted portion of the pedicle and cut away the tumor. The large and engorged omentum was now unravelled and spread out upon a towel, to examine for vessels; but there was such a general oozing from the periphery that the different fasciculi were embraced in three ligatures and five or six inches of the extremities were cut away.

The pelvis and abdomen were now cleaned out; the three stumps of the omentum were secured in the upper part of the wound by two needles; five or six metallic sutures were placed below in the wound, and the clamp occupied the lower border.

A solution of persulphate of iron was applied to the pedicle and omentum, and the wound dressed as usual.

There was considerable vascularity noticed in the abdominal cavity, and some oozing from all points of adhesions, and some of the intestines had a congested appearance. The left ovary was healthy.

The tumor consisted of the right ovary. There was one large cyst, and multilocular deposits on the right side of it, in the pelvic region, and in its posterior wall; weight, between thirty and forty pounds.

The chloroform acted well, producing no sickness, and the pulse was well maintained during the operation. Before the operation the pulse ranged from 120 to 130.

The operation, including dressing and chloroforming, lasted forty-five minutes.—*California Medical Gazette.*

On Scarlatina during Pregnancy and the Puerperal State: By S. L. HARDY, M. D., F. R. C. S. I.; President of the Dublin Obstetrical Society; Physician, Accoucheur, and Lecturer on Midwifery and Diseases of Women and Children at Doctor Steevens' Hospital.

SCARLATINA occurring during the puerperal state is so dangerous a complication that it is with justice we dread it, and take every means to guard our patients against its invasion. Not only in

the puerperal condition, but during all the months of pregnancy, more particularly when approaching the full term, precautions are very desirable. How difficult it frequently is to prevent mothers running all risks during utero-gestation, when their children are the subjects of scarlatina, frequent instances are not wanting to prove. They sometimes escape under circumstances of great exposure. On other occasions, when strictly using precautions, they contract the complaint. Several instances, as examples of both those remarks, lately came under my observation during the last few months, when scarlatina prevailed in and about Dublin.

CASE I.—The mother of several children, in her eighth month of pregnancy, resided in her house (one of the worst ventilated, and not particularly clean), where her eldest daughter, aged fifteen years, had died of scarlatina, and four children besides had the complaint. I was first called to visit the eldest child when attacked, but did not again see her, as she was under the care of others. When next I was sent for I found a girl, aged eleven years, who five weeks previously had scarlatina, in violent convulsions. There was oedema of the face, slow, labored pulse, and dark albuminous urine.

A boy, aged twelve years, was also oedematous, and his urine dark and albuminous. His pupils were largely dilated, and perfectly insensible to light. He was quite blind.

A second younger boy had an abscess in the parotid region.

Under the treatment adopted all those children perfectly recovered. The mother, as already mentioned, was in the same house with those children when I saw them. She went to another residence until they had recovered. She then returned for her confinement, which took place in about a month after, and escaped the disease.

CASE II.—A female child, aged ten years, became ill. Scarlatina eruption came fully out over all the body. On being called to see her I found her mother, who was expecting her confinement, in close attendance upon her, and her sister, aged four years, playing close by her bed. The latter I had taken out of the house; but the mother remained, using, however, the precautions of seldom going into the room, and the free use of disinfectants. Within a month after, this lady was confined, and had no untoward symptom. The child, who had been sent out of the house, also escaped the disease.

It was doubtful whether in this instance the mother had scarlatina formerly, but the young child never had.

CASE III.—A lady, in her second month of pregnancy, was in close attendance upon her child in severe scarlatina. She felt very ill, and contracted the disease herself. She passed favorably through its stages, but was very long in regaining her strength. The symptom upon which she depended as enabling her to consider herself pregnant was a bitter taste in the mouth. It con-

tinued during her attack of scarlatina. Pregnancy progressed steadily, and at the full term delivery was safely completed.

The next two cases are instances in which the patients were attacked with scarlatina at some short time after parturition.

CASE IV.—In the month of February last a lady, who was expecting to be confined of her ninth child, had a very severe attack of influenza, which confined her altogether to her bed. It was necessary to support her strength in every manner by the liberal use of wine, beef-tea, etc.

She had made considerable amendment when her confinement came on. Delivery was got over without any untoward symptom to mother or child. A wet nurse was in readiness for the infant, so that the mother's strength was not taxed in the respect of nursing, a task for which she was quite unequal.

The recovery for the first fortnight progressed slowly but steadily, the nourishing treatment being all along carefully continued. At the end of this time pain of a neuralgic character was complained of in the right leg below the knee. There was no swelling, nor blush of the limb, and in the course of a few days it got well. She was soon able to walk about her drawing-room, but did not leave the house.

When just two months confined she had an attack of fever, which developed a very copious eruption of scarlatina. Sore-throat was complained of, and the tonsils and fauces appeared swollen and inflamed.

Although up to this she had been progressing favorably, yet the strength was by no means restored to its usual state. It was necessary to give wine and nourishment very freely.

The disease passed through its stages, and desquamation followed without interruption, and before the end of a month the skin was looking clear and healthy. Exercise was taken by walking through the drawing-room.

She now went, for change of air, to reside several miles in the country. On the second day she drove out in an open carriage. She felt cold, became very feverish, got sore throat, and was covered all over with a scarlet eruption. I was called to see her. She had a decided scarlatina eruption. This attack passed through the stages, as the former one, but more mildly, and distinct desquamation followed.

I have met with scarlatina recurring the second time in the same individual on several occasions, but never within so short a period from the first invasion, as in this case; exactly one month had expired from the first to the second seizure. Some years ago, when attending a female child of five years old in scarlatina, her brother, who had it one year previously, came into the room. He had scarlatina a year before. He had it again on this occasion with his sister.

The last case I shall mention is one in which scarlatina came on very soon after delivery.

CASE V.—Mrs. B. came to Dublin for her second confinement, which took place the 19th of October last (1867). She was at all times delicate, but the very little strength she had was sadly taxed by the close attendance upon her mother, who had paralysis, and required constant attention. A few days before her confinement she was attacked with influenza, and was so reduced by it that I had great fears for her delivery. This, however, was got over, and she went on favorably until the fourth day, when the pulse became extremely rapid (140), with high fever. As the breasts had become very hard, I hoped the fever was caused by the coming of milk, but shortly after scarlatina eruption appeared all over the body and extremities.

During the first few days there was very great distress, with delirium. The fever then gradually subsided, and recovery progressed most favorably. Throughout the attack the lochial discharge continued of a florid color, but was of most offensive odor, requiring great attention from the nurse. Extreme debility was so prominent from the time of this patient having influenza that wine and nourishment had to be freely and regularly administered. There was some disposition to diarrhoea, which was easily restrained by chalk mixture.

It is satisfactory to be able to state that the children, who were sent to the country, escaped the disease.

Soon after her return to the country this lady wrote to me, saying she felt so remarkably well she could scarcely believe she had been so very ill when in Dublin. I have since had a letter from her reporting a miscarriage in the second month.

This case bears out what has been remarked by Dr. M'Clintock in his paper on "Scarlatina Complicating Childbed"—the secretion of milk and the lochial discharges, with the involution of the uterus and vaginal contraction, all went on without interference. The fetor of the lochia was the only thing which required particular attention, as already mentioned.

It was a fortunate circumstance that even so many as three days had elapsed after delivery before scarlatina manifested itself, thus giving the patient a better chance of recovery, as is well exemplified in Dr. Halahan's report, read before the Dublin Obstetrical Society, and published in this Journal, No. 71. By referring to this report it will be seen that recoveries from the disease diminish the nearer the date of attack to that of parturition. The same was observed in the Vienna Lying-in Hospital in an epidemic of scarlatina in 1799. It was owing to this circumstance that recovery in the present case may very much be attributed, together with the large amount of wine and nourishment. Coming on after the depression of influenza, and the shock of delivery in a constitution naturally weak, as the patient's was, but for the very free use of stimulants the result, I greatly fear, must have been unfavorable.

It is worthy of remark that in the Cases IV. and V., where scarlatina attacked the patients after delivery, neither of them

had in any way, which could be known, been exposed to contagion. They were confined to the house for a considerable time, owing to their having influenza previous to their confinement. They were extremely debilitated, and required the same liberal supply of stimulating treatment. Case IV. is particularly interesting as affording a well-marked instance of the recurrence of scarlatina in the short space of one month from the first seizure of the disease, being in both attacks distinctly marked with all its characteristic features.—*Dublin Quarterly Journal of Medical Science.*

Hour Glass Contraction of Uterus Preceding Birth of the Child :

By WM. H. DAVIES, M. D., M. R. C. S. E. Assistant Surgeon to the California State Woman's Hospital.

MRS. I—, at thirty-five, was seized with labor pains at ten P. M., I was summoned soon after, but on examination, finding my services were not immediately required, retired. I was not recalled until six P. M. of the following day, when I found the pains severe, regular, and apparently effective. On examination, found the os fully dilated and the head partly resting on the brim of the pelvis, from which position the severe pains, although I waited more than two hours, failed to move it in the least. Knowing that the woman had been thrice successively delivered by forceps, on the last occasion having operated myself, and finding she was becoming somewhat exhausted, by the severity of a long-protracted labor, I determined to apply the long forceps. This I attempted and utterly failed. The head being so movable, not at all engaged in the superior strait, and partly resting on the brim, rendered my efforts vain. I at once attempted turning, and to this end introduced my hand into the uterus, over the head of the child, and as far as the shoulders; but beyond this I could not, either by stratagem or force, proceed. I now administered chloroform fully, and renewed my efforts, but with a similar result. Having summoned another physician, we took counsel, and as he thought it preferable, if possible, to deliver her by forceps, the attempt was made, but like my own, failed. The chloroform was re-administered, and our efforts once more directed to turning, but beyond the shoulders neither of us could force our fingers. Feeling that in the multitude of counselors there is *sometimes* wisdom, a third physician was summoned. He proceeded to turn, but once more we were baffled. Seeing that the patient's strength was rapidly failing, and realizing the importance of speedy delivery, I having placed her fully under chloroform, introduced my hand up to the opposing, (or, more correctly speaking, constricting) portion, at last succeeded in wedging in a finger, then two, and presently my whole hand as

far as my wrist, but farther I could not proceed as the uterus so firmly grasped my hand as to render it almost powerless; but after a few minutes, the chloroform having produced partial relaxation, I was enabled to seize the left foot, on which I immediately made traction, and after some time succeeded in bringing it down, feeling as I did so the body of the child gradually being retracted through the constricted portion; and continuing my efforts, brought the foot down to the outlet, the head at the same time freeing itself, and passing into the upper portion of the hour glass contraction.

Attaching a noose to the foot, I left to my companions the task of completing the delivery, which occupied some time, as the uterus continued to grasp the child, and it required considerable force to deliver it. There was no difficulty in delivering the placenta, and but very slight haemorrhage; and the woman, after passing through a rather sharp attack of puerperal fever, ultimately made a good recovery. The case is peculiar, from the fact of there being undoubtedly an hour-glass contraction of the uterus, firmly grasping the child below the scapula. This was proved by the fact that when I succeeded in passing my hand through the constriction, I found it in a free cavity, the uterus not being uniformly contracted around the body of the child; and it was further proved by the deep indentation found on the body of the child after birth, remaining in fact, for some days. Another uncommon feature in the case was the total failure of the chloroform, for so long a time, to procure any relaxation of the uterine fibers, although used to its fullest extent; and I think a third point of interest is the fact of the hour-glass contraction yielding on the birth of the child, when we would have supposed it to continue as long as the placenta was in utero.—*California Medical Gazette.*

A Case of Maternal Impression : By E. CHILD, M. R. C. S.

ON the 26th of August last, I was summoned at eleven P. M., to attend Mrs. A. in her first labor. On arriving at the house I found the pains very lingering and slight; the os was dilated to the size of a sixpenny piece. I could not detect the presentation. Finding I should not yet be wanted, I returned home, telling the nurse to send for me when the pains came on stronger. At six A. M. the following morning I was called up. The labor was progressing and the breech presenting. It continued to do so until four P. M., when as soon as the breech passed the os externum, the whole body of the child was expelled with some degree of force. It was dead, and from the peeling of the skin I conclude it had been so for some time. When I touched the cord it came

away in my hand, leaving the placenta in utero, which I extracted after a little manipulation. It was a fine, full grown male child, formed naturally as to its body, with the exception of the nails on the thumbs, which were like those of a rabbit. On examining the head I was surprised to find the parietal, frontal, and part of the occipital bones wanting ; and at the space corresponding to, but larger than, the anterior fontanelle, was the brain, entirely denuded of skin or membrane, not even being covered with arachnoid. There was a little hair over the eyes, none elsewhere. The eyes, palate, and tongue, were similar to those of a rabbit. At first I was inclined to think that in the absence of these bones the action of the uterus had squeezed the eyes into the shape I had found them, but on making inquiries as to any fright, and having heard the following story, I was induced to consider it a case of maternal impression.

During the second month after conception the mother went to a penny show, in which she saw a trained horse pull the trigger of a pistol, pretending to shoot a rabbit. A dummy was then thrown out ; the back of its head was bleeding, having to all appearances been shot off. This corresponded, as the mother-in-law declares, to the marks on the child's head. My patient seems never to have forgotten the circumstance during the remainder of her pregnancy, and was considerably frightened at the time. I was lucky in having to contend with a breech presentation ; if it had been a natural one I should either have been puzzled to ascertain what it was, or, perhaps, have inadvertently pushed my fingers through the brain itself. The mother did well and is now quite recovered.—*Lancet*.

Laceration of Vagina : By A. B. STEELE, Esq., Lecturer on Midwifery, Liverpool Royal Infirmary School of Medicine.

I was summoned by a midwife to a woman, the mother of several children, who had been in labor for a few hours, all apparently going on well until just before I was sent for, when the pains ceased suddenly, and were replaced by a continuous sharp lancinating pain in the abdomen, the patient at the same time becoming very faint and sick, leading the midwife to suspect that rupture of the uterus had taken place. There was no unusual haemorrhage. I found the woman in a state of incipient collapse ; and, on examining per vaginam, the head low in the pelvis. I at once applied the forceps and delivered a living child in a few minutes and with very slight traction ; the placenta followed immediately, with no more than the ordinary amount of discharge. On introducing my hand after delivery was completed, the uterus was found intact and moderately contracted ; but in the situation of the posterior cul-de-sac of the vagina, was a rent large enough to admit easily the hand, which was readily passed along the

posterior surface of the body of the uterus, and the convolutions of the intestines could be distinctly felt. The patient was carefully watched, opium was given freely, with stimulants, until reaction was established; and she gradually recovered without a bad symptom. The woman had been ill-treated by her drunken husband, who, about a fortnight before labor came on, had kicked her violently in the back, which may possibly have caused the injury, although it is singular that so long an interval should elapse before the mischief manifested itself. The facility with which the forceps were used, and still more conclusively the pre-existence of symptoms of serious lesion before their application, show that the injury did not occur during delivery.—*British Med. Journal,*

ANATOMY AND PHYSIOLOGY.

COLLATED BY S. S. HERRICK, M. D.

Passage of Sanguineous Corpuscles through the walls of the vessels; mechanism of this phenomenon and consequences which result therefrom in relation to the formation of pus, and to absorption in general. Translated expressly for the Chicago Medical Journal, by WALTER HAY, M. D., Associate Editor.

THE point of departure of this problem is found in the researches of Cohnheim into the subject of the passage of sanguineous corpuscles through the vascular parietes without apparent lesion of these parietes. The white corpuscles would constitute pus, and the red would form under the given conditions sanguineous extravasations.

Let us first consider the facts; we will next examine the mechanism by means of which they are produced, and the consequences which may be deduced therefrom.

Mr. Cohnheim exposes to the air the mesentery of a frog paralyzed with woorara. Inflammation is developed, and at the period of oscillation the white corpuscles, which seem glued to the internal face of the wall of the vessel, depress this wall, lodge in sorts of pockets which are dependent from these, and continuing their migration, spread themselves into the surrounding tissues, where they are found in a free state, similar in all respects to what they were in the interior of the vessels.

The passage of the red globules through the vascular parietes has been observed and described by M. Strickler, of Vienna, and his pupil, M. Bussak. When they poison frogs they inject under their skins a solution of a tenth part of chloride of sodium, and produce thereby in these animals a scorbutic condition, which is manifested by haemorrhages into the lungs, the liver, the kidneys,

the intermuscular tissue, etc. The two preceding observers have determined that in these conditions the red globules which form the hemorrhagic foci have traversed the walls of the capillary vessels. They have seen, in fact, some of these globules which had remained imprisoned in the wall, half projecting, and as if entangled in the intra-parietal opening through which they had found an issue.

M. Bastian has repeated the experiments of the German physicians, and has made them the subject of a communication to the pathological society of London. After having paralyzed a frog by means of a subcutaneous injection of woorara, he tied the femoral vein, and soon the blood is massed in the capillaries and the veins. The following are the consecutive phenomena which he was enabled to observe.

Whilst examining the interdigital membrane, the serum is seen to transude and induce a certain amount of oedema. The blood soon begins to oscillate in the vessels, and after fifteen or twenty minutes it is completely arrested in some of the capillaries. The red corpuscles are ranged one against the other, and appear to form a homogeneous cylindrical mass. The stasis extends next to other capillaries, and terminates by involving the veins. At the expiration of forty minutes projections form in the walls of the capillaries, which increase in number and in volume so as to give these walls a tuberculated appearance. Then these projections separate gradually from the capillaries, and are found in the neighboring tissues masses of red corpuscles.

If the ligature of the femoral vein is removed, the circulation is re-established in the capillaries, and it is then possible to see besides the red globules which constituted the aforesaid masses, other globules pursuing the same transit as those, and more or less entangled in the capillary parietes. It is possible thus to follow the globules in all the phases or degrees of their migration. The experiments of M. Bastian are thus confirmatory of those of MM. Cohnheim, Strickler and Bussak.

Such are the phenomena observed. By what mechanism are they produced, or in other words, how can the white or red sanguineous corpuscles in conditions of inflammation, the scorbutic state, or under compression, traverse the capillary parietes? Three orders of explanation, three hypotheses are proposed:

The most simple, that which suggests itself to the mind very naturally, is that the vascular walls are perforated with pores in which the corpuscles may engage themselves. Such likewise is the theory adopted by MM. Cohnheim, Recklinghausen, Letzterich, F. Keber, etc. The microscope also seems to justify this manner of viewing the subject. M. F. Keber, indeed, since 1854, and in a very recent treatise designed to recall his first investigations, has described and figured the pores or stomata of the capillary vessels, and the vacuities in the intestinal epithelium. M. Cohnheim, on his side, agreeing with MM. Asby, Eberth, Auerbach

and others, admits that the capillaries are formed by the juxtaposition of flattened epithelial cells. Now at the points of reunion of the angles of the cells there would remain orifices, pores, through which the corpuscles placed transversely might become engaged, in consequence of the pressure which they undergo in the vessels.

The second hypothesis has for its advocates MM. Strickler and Bussak. These authors consider the parietes of the capillary vessels as composed of a protoplasma, soft, homogeneous and contractile. This protoplasma possesses the property of giving origin to appendices, filiform prolongations which increase, are hollowed out and form new capillaries in communication with the parent wall. The transit of sanguineous globules does not, therefore, necessitate the pre-existence of pores in the capillary wall; it occurs in consequence of an active function in this very wall. MM. Strickler and Bussak admit that the protoplasma in question comports itself like the cells of connective tissue, and that it can, after the manner of these latter, undergo pathological transformation.

Finally, according to a third hypothesis, sustained by M. Baslian, it is not the capillary walls which are active, but, in fact, the red corpuscles of the blood. These last, indeed, can traverse vascular membranes, in consequence of certain active amæboid movements which may manifest themselves subsequent to alterations in the blood plasma. The phenomena, therefore, may be produced in the same manner as the passage of leucocytes through the venous parietes, as M. Cohnheim has established, or through permeable membranes, as M. Lorbet has demonstrated.

We shall not dwell further upon these different hypotheses; they demonstrate the necessity of new investigations. However it may be, the facts which they intend to explain exist none the less, and the consequences which are deduced from them recall into discussion theories by which other orders of phenomena have been explained.

We have seen already that M. Cohnheim, after having determined the passage of white globules through the vascular walls, was disposed to consider them as constituting, after their escape, pus globules. M. Lorbet shares in the same opinion. M. Lionel Beale on the contrary, opposes it. According to the English author, the white corpuscle of the blood and the pus corpuscle are by no means one and the same thing. They cannot ever be transformed, the one into the other. He adds, that suppuration does not pursue the same process in warm blooded animals as in frogs. His understanding of the genesis of pus is as follows:

The pus corpuscle originates from the normal blastema, (germinal matter,) of any tissue or element whatsoever. If this blastema receives an excess of nourishment, it increases, is divided, sub-divided, and gives origin to products which differ by their properties from the primitive elements. Pus may, therefore, originate from the proliferation of all sorts of blastema, of

that which is peculiar to nerves, to muscles, to vascular walls, etc., as if that which pertains to epithelial cells or to connective tissue. But according to M. Beale, although he admits the passage of the white globules through the vascular parietes, these globules do not become pus corpuscles; it does not appear to him rational to give a new appellation to an element which has only changed its position.

We are here presented with three or four theories at least to explain the formation of pus. According to M. Virchow and his school, the pus globule originates only from cellular proliferation of connective tissue.

Mr. Beale asserts, as we have seen, that every tissue may participate in this process of proliferation.

According to M. Robin and the French school, pus globules may be developed by genesis in the midst of an exudation or of a blastema.

Finally, is presented a new theory, or rather an old theory rejuvenated, according to which, these same globules are only white blood corpuscles, which may have traversed the vascular parietes.

In the face of all these hypotheses, these doubts, it must be understood, that the most elementary facts in pathology are discussed, and that openly in the Academy, the long mooted question is ever agitated, if pus may or may not be re-absorbed in all its elements. It is permitted to hope, however, that the recent researches into the parietes of vessels and of mucous membranes, and a greater number of experiments upon the passage of the blood globules through these walls and membranes, will throw some light upon the manner in which the mechanism of phenomena, so numerous and so varied, which are associated with absorption, is to be comprehended.

It is evident, for example, that if the porosity of the vascular walls, or of the epithelial investment of membranes should receive a definite demonstration, the general opinion upon the absorption of organic elements, and of mineral substances reduced to powder, would be entirely modified.—*Chicago Medical Journal.*

Notes on the Physiology and Pathology of the Nervous System : By J. HUGHINGS JACKSON, M. D., F.R.C.P., Physician to the Hospital for the Epileptic and Paralysed, and Assistant-Physician to the London Hospital.

Hemispherical Co-Ordination.

I WISH briefly to state further reasons (see p. 208) for believing that *both* sides of the brain are educated in speech, and yet that *the left is the leading side, and the right the involuntary or automatic.*

I have, then, to prove: 1. That disease of but one side of the brain—almost always the left—renders a man unable to speak; 2. That, contradictory as it may seem, the “speechless” patient’s organisation contains processes for words; 3. That the essential defect underlying all the peculiarities of cases of speechlessness is an inability to produce words *voluntarily*, automatic reproduction being possible.

I think, to repeat, that these peculiarities may be accounted for by supposing that of the two pairs (1) Voluntary and Involuntary Expression and (2) Voluntary and Involuntary Perception, Voluntary Expression is lost, and that in consequence not only is actual speech wanting, but the internal speech also, which corresponds to it.

Both sides of the brain are doubtless automatic, motor and sensory, but one side [usually the left] in most people must differ from the other, since disease of but one side [usually the left] makes a person unable to speak. On one side [usually the left] occurs the “dawn of volition and the cessation of automatic action,” which is, Spencer thinks, one and the same thing. I may here say that I do not make a total separation betwixt Perception and Expression by representing one as a complex development of sensation only, and the other of movement only. It is plain that, even in a spectral illusion, there are revived not only ideas of objects or color, but of distance and solidity, and this necessitates a nascent excitation of the muscular movements associated in vision (*vide infra*).

I take the following propositions to be granted. I am not aware that any one denies them:—We are not born able to speak at all, but we are born with automical possibilities (organized experiences) (see Spencer’s “Psychology,” p. 582), which can be trained in the acquirement of *any* language. Language is, like baking and brewing, an *art* handed down from generation to generation (Wedgwood). We think by help of words—i.e., by acquired arbitrary signs—and these are motor processes.

I leave out of present consideration the occasional involuntary utterances in “speechless” patients, which I suppose (see *Lancet*, Feb. 13, 1866, also *Lancet*, Dec. 1, 1866, *Lond. Hosp. Rep.*, vol. i. p. 453, *Medical Times and Gazette*, June 23, 1866, and August 15, 1868) to be the result of action of the right side of the brain. These utterances show that the man does utter words involuntarily who cannot talk voluntarily. I would here remark again, however, that such utterances are nearly always formulae which have, by frequent repetition and wide association, become automatic in an extreme sense of the word, and which, although possibly at first laboriously acquired by one [the left] side of the brain, have become “deposited” on both sides—in fact, have become historical—part of the organism, which is a two-sided one. Much of our talk is made up of acquired forms. There is mannerism on a very large scale. I might instance that speechless patients sometimes

retain power to sing, which is at the least a more automatic process than speech (see *Lancet*, Feb. 17, 1866). I have also instanced that inherited automatic movements (such as those for respiration) emotional movements (as smiling), escape when a man is rendered speechless; and I have pointed out that, by the adoption of Broadbent's hypothesis, which I presume to have verified in cases of hemi-spasm, the inference is that the processes for all these have a [an equal?] representation in each cerebral hemisphere. I think the highest psychical processes have not an equal—at all events, not a similar—representation in the two hemispheres.

Now, Broca and Moxon (*Med-Chir. Rer.*, April, 1866) almost contemporaneously have advanced reasons for supposing that, although the two brains are alike at birth, the *left side of the brain* only is educated. M. Broca puts it that we are left-brained as well as right-handed. M. Broca thinks that the right side is altogether uneducated, except for the movements of articulation.

Now, let us look at the facts. I do not speak of the mental condition of "aphasic persons" in general. It is especially important, I conceive, to bear in mind that Class 2 (see p. 209) is excluded. I speak of cases of persons who have lost speech altogether. I mean by a "speechless" person one who is in the following condition:—

(1) He cannot talk; (2) he can understand what we say, and can follow what we read to him; (3) he cannot write from himself; (4) he can copy; (5) he cannot write to dictation; (6) he cannot read to himself.

1. *The patient cannot talk.*

The apparent exception is that a "speechless" patient can usually utter one or two words, like recurring decimals, always the same; and these words (in accordance with the view I hold) are frequently the semi-automatic words "yes" and "no." It may be a phrase, and there is some evidence towards the belief that this phrase is the result of the automatic action of the right side of the brain.

2. *He can understand what we say, and can follow what we read to him.*

When we speak or, let us say, when we read to a "speechless" patient, the sense does reach his understanding. When our words fall on his ears, they act on the sensory surface, by which he was educated to talk. They follow a beaten track, trodden for many, sometimes for very many years, and no doubt the aërial vibrations on the auditory nerve expansion provoke their associated movements by a complex reflex action, the brain being the "centre." The reproduction is easy. Indeed, if verbal signs are essential to thought (and no one denies that they are essential to elaborate thought), and if the patient is able to understand what we say to him, there must be reproduction of verbal signs in him. The reproduction is, of course, not actual—not outward speech; at least it is rarely so. (See, however, a case mentioned by Dr.

Bateman, *Medical Times and Gazette*, September 5, 1868.] This is proof positive, I think, that although the patient is speechless he is not wordless. Whilst, however, these verbal signs may be developed in him by our talking, he cannot initiate verbal movements. The possible reproduction is automatic, or reflex, or involuntary. There is a great difference betwixt his echoing our words and a voluntary production of words from himself. The words lie, I imagine, in the right side. It may, however, be said that the internal reproduction occurs on the left side of his brain, and that the patient does initiate verbal movements, and would actually reply if the damage nearer the corpus striatum did not prevent words getting out.

3. *He cannot write from himself.* Writing is voluntary speech in another form, and something more. Printed symbols are symbols of symbols. When we write, we revive the verbal (motor) signs, and next the sensory signs of those signs. We learn to write years after we have acquired words, and also after we have acquired marks for these words. Writing is then an acquirement on a double acquirement. It is obviously more artificial than speech, and—with the exception, proving the rule, that speechless patients who cannot write can often sign their names—plainly requires effort. The fact that patients who have learned to use a second language become from disease able to speak in their mother tongue is also in accordance with what follows.

If the difficulty were merely in getting the words down to the noise-making apparatus of the tongue, etc., how is it that the patient cannot write? It is plain that he can adapt visual to verbal signs, for he can copy writing accurately with his left hand. (See 4, on Imitation.) To write from himself, he would have voluntarily to reproduce the verbal symbols internally before he could make their representative marks on paper. In short, he would have to speak internally first, and in speaking there is something more than involuntary reproduction of words by sensations or perceptions. Thought is not exactly “internal speech.”

4. *He can copy.* He usually copies the printed page in writing letters. In this case his copying is not, as has been said, mere imitation from educated eye to educated hand. *He obtains the caligraphic marks from his organization.* If he merely imitated conventional marks, it might be supposed that in copying there was no reproduction of verbal signs intermediate betwixt eye and hand.

If this be correct, we see again that he cannot reproduce verbal signs, but that they are reproducible in him by the impact of their permanent visual representatives, but only so long as, or as often as, these visual representatives strike on the looking eye. The process of copying develops no idea in the patient, for the reproduced words revive no images of “concepts” but the images of caligraphic marks, in themselves meaningless, and which to develop meaning would require re-translation into verbal signs.

It is otherwise when words are spoken to him. There is possible then a revival of real images of things—concepts; the sounds of words usually give no other suggestion; moreover, there is possible a double revival of images (at first (left) involuntary, and then (right) *voluntary?*) the words in this process holding only a subordinate position betwixt these alternate reproductions. But when he puts his ideas in words for speech or for writing, he has to reproduce the words *voluntarily* (or, as we say, *to find them*) the words then taking the lead in the active process. This the “speechless” man cannot do, as the side of *voluntary* revival, of verbal—motor signs—is wanting.

5. *He cannot write from dictation.* It may be asked, how is it that he cannot write words which we dictate to him, when this process is seemingly not so complex as writing from copy, and when the words are [see 2] really reproducible in him by the sounds our words? When he copies, it will be observed that he mostly of transfers each letter from the page to the sheet.

The revival is but a momentary revival, but as the page is always before him, it is although an intermittent, practically a continuous revival. It is otherwise in dictation: here the revival is, as in the other, momentary, but, unlike in the other, it is not practically continuous, and even if the word be frequently repeated by us the patient himself does not govern the intermissions. Besides, although the dictated words do revive verbal signs, these automatically revive next not images of writing letters, but concepts [see 2.] If writing is to occur, there must be a *further stage*. The patient would have to revive voluntarily the words, in order that he may transfer them to paper. In other words, in dictating to, as well as in speaking to a patient, we revive verbal signs which next develop ideas. When he copies, verbal signs are revived too, but these develop merely the visual images of caligraphic marks. It is not possible for the “speechless” man to carry on at the same time, *i. e.* in alternation, *two* such different processes as understanding the meaning by words and writing, as healthy people can. The right side of his brain is not leading as well as automatic, as is the left.

6. *The patient cannot read.* It is obvious that he cannot read aloud, but neither can he read to himself. This is not a defect of sight nor a defect of simple perception. He cannot read because he cannot voluntarily repeat the words internally. He recognizes printed words as *objects* probably as well as before—*i. e.*, just as I know Chinese words from Arabic words—for he identifies headings, handwritings—but he cannot reproduce the *verbal associations*—the verbal after the visual symbol—which it must never be forgotten are *arbitrary* and acquired associations—acquired in the extreme sense of the word. They are learned by tiresome actual schooling, to which learning to speak is comparatively a simple process (see No. 3.) If (see 1) we take the book and read to him, he understands so that an automatic reproduction of words is possible

And it is not denied that (see 4) there is automatic reproduction of verbal signs by their representative visual signs on the printed page. There must be, or the patient could not copy; but from what is said of dictation and copying, it would seem that the defect in reading is that the patient cannot *voluntarily* reproduce words. It is, I am fully aware, easy to say this, but it seems to me that the facts really do lead to such a conclusion. It has been suggested to me that in copying the printed letters the "speechless" patient reproduces the caligraphic marks directly—*i. e., without* the intermediation of verbal signs. A similar hypothesis would account for the inability to read. Still I do not think this easy explanation is satisfactory, and I have more to say of reading on another occasion from a larger point of view, which I can now only indicate in mere outline.

Spencer says ("Psychology"), "The difference between an involuntary movement of the leg and a voluntary one is, that whereas the involuntary one takes place without any previous consciousness of the movement to be made, the voluntary one takes place only *after it has been represented in consciousness.*" The voluntary is preceded by a nascent excitation of the parts to be moved. In the next communication I hope to show that in active psychial processes, motor and sensory, there is subjective reproduction prior to objective reproduction—a sensation, for instance, is first put in relation to its subject, and next considered in relation to its object—that there is something like a reduction of relations of sequence to relations of co-existence—*i. e.,* of alternate sequence—in the two terms of a proposition; and that what I have advanced as to the crossed differences of the two brains is in harmony with this view as regards both the related pairs, voluntary and involuntary perception, and voluntary and involuntary expression.—*London Medical Times and Gazette.*

Length of the Colon in Young Children.

At a stated meeting of the New York Obstetrical Society, a specimen of hemicephalus, or anencephalus, was presented by Dr. Jacobi. The child weighed nine pounds. The viscera were well developed, and the colon was unusually long in this case. Dr. Smith made the remark, that he had measured the colon in thirty cases of children under six months, and discovered that from one-quarter to one-third of the large intestine lies below the brim of the pelvis. Dr. Jacobi stated that the descending portion of the colon, in the young infant, was nearly twice the length of that of the adult. It crosses over diagonally to the right side, instead of lying parallel to the long axis of the body. There is no proper sigmoid flexure as in the adult, but, on account of the great length of the colon, a number of flexures are found.—*American Journal of Obstetrics.*—*Boston Medical and Surgical Journal.*

MEDICAL NEWS AND MISCELLANEOUS.

Transmission of Light through Animal Bodies.

DR. Richardson exhibited to the British Association for the Advancement of Science, a lamp which he had constructed for transmitting light through the structures of the animal body. He believed that the idea that this could be effected was given in Priestly's work on Electricity; that great chemist had observed, on passing a discharge of a Leyden battery through his finger, that the structure seemed to present luminosity—but the operation was painful. A suggestion of Dr. Macintosh, last year at Dundee, had been acted on by Dr. Richardson, who had observed the motion of the heart and of respiration by direct ocular demonstration while these organs were under the influence of various bodies belonging to the ethyl and methyl series. Dr. Richardson had so far extended the principle that he was able to transmit light through the various tissues of the bodies of large animals. The particular details of all these interesting and elaborate experiments he described. In a child, the bones could be seen in the arm and wrist. The movements and outline of the heart could also be seen in the chest.—*London Lancet.*

On the Mode of Administration of Phosphorus and of its Effects in Small Doses.

FOR internal administration, Dr. G. Dujardin Beaumetz, recommends one gramme of phosphorus to be dissolved in one thousand grammes of chloroform; this solution is enclosed in gelatin capsules (perles) each of which should contain ten centigrammes of the solution. To guard against the action of light, capsules should be colored. In administering the capsules, one should be given on the first day, two on the second, three on the third, the dose being increased by one capsule daily, until some signs of derangement of the digestive organs, colicky pains, vomiting or diarrhoea, occur; the phosphorus is then intermittent, to be again resumed, after an interval of several days, on their complete subsidence, being careful to always recommence with small doses. Dr. Dujardin Beaumetz has carried the dose as high as ten capsules.

Given in small doses, phosphorus produces great excitement of the nervous system, increase of muscular activity, exhilaration of the spirits, excitement of the genital organs, without causing any decided effects upon the circulation of the temperature.—*N. Y. Medical Journal.*

Imprudent application of Carbolic Acid. By Prof. P. H. VANDERWEYDE, M. D. of New York.

MR. BERGER, a Loudon chemist, lately killed himself by carbolic acid, in attempting to introduce a drop of it into a tooth for the cure of the tooth ache. The London Journals say that the remedy was a new one, and that he died as a martyr of science, by attempting to test this new remedy; but when we take into consideration that creasote has been used for years for this same purpose, and that this substance owes its principal properties to the carbolic acid it contains, (it being in fact only impure carbolic acid) there is nothing new in the remedy, besides some dentists in this country have substituted for the creasote, and I have in the last two or three years prescribed it exclusively for the same purpose. The way to use it is to place a drop on a small cotton plug, and introduce it into the cavity; it is a way which will suggest itself to any one of common sense, even one who has never seen dental operations. Mr. Berger, however, acted in a most foolish, stupid and imprudent manner. Dr. Metcalf testifies that he (Berger,) had fixed an elastic tube 10 feet long to a large glass jar with carbolic acid, had then seated himself in a chair, and inserted the end of the tube in his mouth, for the purpose of allowing a drop of the liquid to fall into his tooth. He had a brass regulator on the tube to control the quantity of the acid, but it did not act right, and the volatile poison overcame him, he became giddy and fell. Being alone in the room the poison continued flowing, the heart's action was stopped and he died. Comment is unnecessary.—*American Journal of Dental Science.*

Prevention of Contagious Diseases.

SIR Patrick Grant, the Governor of Malta, gives most valuable information respecting the effect of sanitary restrictions in that island, in an official letter to the Home Government, obtained at the request of Mr. Berkeley Hill, Honorary Secretary, to the Association for the prevention of Contagious Diseases. His Excellency reports that, up to 1861, much contagious disease prevailed among the troops at Malta. An ordinance was passed in that year to check it, which occasioned "an immediate diminution of these diseases to almost an unprecedented extent; and it has continued so up to the present time" (July 1868.) Sir P. Grant is convinced "that large or small bodies of men should be personally examined before being granted access to an isolated community, and he will enforce a strict adherence to this well advised principle." The essential conditions of the ordinance of 1861 are: 1. Regular examination twice monthly, with the power of examining any person complained of. 2. The detention of the diseased

while liable to communicate their disorder. The yearly average in Malta is about 100; and the examining physicians have remarked that some women are repeatedly sent to hospital, while others remain constantly healthy. The number of cases of disease, not individuals—for, as before said, oftentimes the same women is admitted over and over again—has steadily increased; in 1861 it was 85, in 1867 it was only 32. Corresponding diminution has attended the admissions for contagious disease among the troops. Mr. Inspector-General Paynter says that, in 1860, before the regulations were enforced, 916 men were sent to hospital; in 1867, the number dropped to 689, and in 1862, when the regulations had been enforced a year, the number fell to 340. To the present time, the annual number has been constantly under 300; this includes, also, an average of 50 men who are diseased before they land from England. The average strength of the garrison is over 5000 men, and many strangers call at the island in the course of the year. A few English camp-women who follow the regiments manage to evade the regulations, from whom much of the disease which still remains is spread. In the navy, the results of sanitary restrictions are still more complete, as sailors, being comparative strangers, cannot evade the regulations in the way the soldiers do. The average naval force in port at Malta is 3800, and the number of men who land in the year reaches 8000; but Dr. Domville reports that, during the last two years, only six cases of disease contracted in the island have been admitted into the naval hospital.—*London British Medical Journal.*

Medical Heroism :

WHATEVER may be thought of the value and possible results of M. Villemain's well-known experiments, it cannot be denied that they have at least had the excellent effect of stirring up a world of ideas, and of giving a strong impetus to modern scientific researches upon the nature and etiology of tuberculosis. Our readers know with what zeal and curiosity medical experimentors have taken up the subject of inoculation of the tubercle; and the number of rabbits that have been sacrificed to this goodly end is something fearful to contemplate. It may be said that this question has fairly impassioned the medical public; but it could scarcely have been expected that any one investigator, however zealous in the cause of science or confident in the safety of his doctrines, would have ventured so far as to inoculate the matter upon himself. This, however, has recently been done. A week or two ago, M. Lespiaud, one of the gentlemen attached to the surgical department of the Val-de-Grâce, in the presence of several of his colleagues, extracted granular matter from the body of a phthisical subject and introduced it under his own integu-

ment. Of course such acts, if they are not to be followed, are much to be admired, and the annals of our profession are not wanting in similar examples of medical heroism. It may be asked, however, whether M. Lespiaud might not have turned this courageous disposition to some better and more practical purpose. We do not see what new light his experiment can throw upon the subject. He may fall a victim to his zeal for science, and yet the value of the experiment for which he may have sacrificed his life may be called in question. For all we know, M. Lespiaud may be a very stout man, with all the appearances of a most robust constitution; yet, though he should dwindle away henceforth into utter emaciation, and die amid all the symptoms of tubercular disease, those who have no faith in the value of tubercular inoculation will not be convinced, and it will be argued that M. Lespiaud possessed the seeds of the fatal disease before performing inoculation upon himself. If, as it is much to be hoped, the reverse be the case, it will be of still less practical value. The supporters of the inoculation theory will not fail to observe that the experiment was imperfect, or conducted under unfavorable circumstances. Whilst making these remarks, suggested by common experience of such matters, we cannot but pay a just tribute of praise to M. Lespiaud for the courageous way in which he has exposed himself to the effects of a most dangerous and merciless disease.—*Lancet.*

The Siamese Twins :

ARTICLES have been appearing of late about the above individuals and their visit to Paris, with the object, as it has been asserted, of securing the skill of M. Nélaton in making an artificial separation of that bond by which nature has joined them together in a way which no Divorce Court can overcome. The subject was a good one on which to hang a little sensational writing: and the mysterious nature of the union of Messrs. Chang and Eng, the Siamese in question, as well as the intensely interesting nature of the operation, have been dwelt upon. We gather, however, from a short and interesting article by Dr. Eve, the late Professor of Surgery in the University of Nashville, in the number of the *Richmond and Louisville Medical Journal* for this month, that the twins have probably no intention of the kind, and that all the accounts about the physical, moral and mental unity between them are incorrect; the twins are two beings possessing as separate and complete organizations as any two other individuals, the only connection being a short cartilaginous and integumental band common to both, the severance of which would, in all probability, be perfectly harmless. It has never been the opinion amongst medical men in America and Europe that the death of one of the brothers would be instantly followed by that of the

other, or that their separation was surrounded by any fearful difficulty, or that the link between them is a means of perfect physical union by which sensations or impressions are conveyed from one to the other. So far from it, the band is almost insensible, and on shipboard they were pulled about by a rope tied to it. Dr. Eve tells us that no pulsating vessel has been detected in it, though, undoubtedly, it is just in the centre of this cord, made up of gristle and skin, and for about an inch on either side, that there are vessels and nerves communicating from one to the other. Here, but nowhere else, a touch on the space indicated is felt by both. Precisely here, and here alone in the band uniting them, there is sensation, and nothing else whatever common to both.

The division of the profession thirty-eight years ago, when this case was first exhibited, was that the ligament was cartilaginous, probably a prolongation of the ensiform cartilage of the sternum; and the chief, if not the only objection to its division has been that the peritoneum might be involved in the separation. The question of separation was with themselves or their guardians, and not with the profession. In 1830 we declared that the case was more rare than curious. If one of them died, it would certainly be the duty of some one to make the attempt, taking care to divide the parts nearer the one deceased.—*Lancet.*

Artificial Digestion.—Dr. W. Marcet has published a pamphlet on preparing food for weak stomachs, which the London *Medical Times and Gazette* speaks of in high terms of commendation. Dr. Marcet has contrived a method by which the natural process of digestion is imitated, so that food may be taken in a partially digested condition, and thus more nutriment can be managed by a weak stomach than it could otherwise dispose of.

He took hydrochloric acid and some pepsine, added these along with water to a quantity of meat, allowing the whole to simmer over a water bath at about the temperature of the body. When the meat was sufficiently broken up it was strained, and the acid neutralized by carbonate of soda, when it was ascertained that the product was of a most agreeable character, easily digestible, and containing a vast deal more nourishment than common beef tea. The proportions he recommends are, 58 grains of hydrochloric acid, sp. gr. 1.1496, in a pint, (20 oz.) of water, with 15 grains of Boudal's pepsine, and 81 grains of bicarbonate of soda to a pound of meat, (weighed raw,) the chemicals costing about seven pence. Where pepsine is unattainable, strips of calves' stomach answer very well; or we do not see why the rennet prepared from it, and used for curdling milk, should not be employed. The food thus prepared keeps well until neutralized, but not so well afterward. One point to be noticed is, that no metallic vessel should be used in the process less the acid act upon it.

Insecticides.—

A RECENT traveller, Jager, in Sketches of travels in Singapore, Malacca and Java, published in 1866, furnishes some testimony of much interest on this subject. He says that a tincture prepared by macerating one part of *Pyrethrum rosam* in four parts of diluted alcohol, and then thinned with ten parts of water and applied to the skin, gave perfect security against attack of mosquitoes and other insects, enabling him to pass the night in an open boat on the rivers of Siam without any annoyance; and moistening the beard and hands with the same liquid would protect the hunter for at least twelve hours from the flies. On the island of Luzon, a board six inches wide was fastened horizontally all around his house, and a track of the powder several inches in width, laid along this board, proved an insurmountable barrier to the incursions of the countless myriads of ants infesting the country.—*Med. and Surg. Rep.*

"Artificial Stone; the Process of its Manufacture."

THIS remarkable and important manufacture is at last not only well established on chemical principles, but carried out on a large commercial scale. Nearly a quarter of a century has elapsed since Ransome, of London, commenced his experiments in this direction. For years the concrete stone has been subjected to every test that ingenuity could devise—to heat and frost—to water, fresh, salt and impure, to wash and attrition, and to every atmospheric exposure. Very few natural stones are as durable or as uniform, and the best of them are costly, and, in many localities inaccessible.

But the comparative cheapness and durability of the artificial stone are of no greater importance to architecture as an engineering art than to architecture as a fine art. The enormous expense of cutting shapeless rocks into the exact and elaborate forms of beauty, prevents the general adornment of structures. But when the beautiful form may not only be *cast in a mould*, but endlessly reproduced from the same mould as easily as the ugly form; and when the most florid ornamentation may be more cheaply moulded than the plainest and most unrelieved outlines can be cut, there will be no further excuse for the monotonous, ugly, or cheap-looking buildings that characterize street architecture, especially among the Anglo-Saxon people.

"Those who have occasion to study in detail, or to practice the new art, should read the various illustrated and technical articles upon it in the London *Engineering*. The general features of the process are as follows: we quote from the *New York Times*, which presents a résumé of the subject.

"Mr. Ransome's patent concrete stone consists of sand united,

not by any mechanical sticking compound, but by chemicals which transform it into a new and homogeneous mass. It is particles of sand, in some cases mixed with a little limestone, united by silicate of lime. The manner of forming this silicate of lime in the mass is, in fact, the essence of the invention. The sand is mixed with a viscid solution of silicate of soda, which produces a pastry mass, readily moulded. When the required forms are produced they are treated with a solution of chloride of calcium, when the silicic acid and oxygen of the silicate of soda combine with the calcium of the chloride of calcium and form silicate of lime, while the chlorine of the chloride of calcium unites with the sodium and forms chloride of sodium (common salt), which is afterwards washed out. But Mr. Ransome had no sooner discovered *how* to provide for the chemical reactions than the commercial problem of cost of materials assumed very serious proportions. Silicate of soda, the chemical upon which the process hinges, was, indeed, produced by two modes, both of them, however, expensive, and neither of them adequate in degree. The solution was too weak to answer his purpose. The scientific importance and the practical difficulty of the improvement, therefore, lay—just as they did in the Bessemer and other processes—not in making the desired material, but in making a material with which to make it. Mr. Ransome's great invention was the production of silicate of soda under pressure. While powdered flint-stone, boiled in a solution of caustic soda, at the atmospheric pressure for many hours, would yield but a weak and inadequate fluid, whole flints so boiled, under a pressure of sixty pounds, readily dissolved and formed a strong silicate of soda."—*Scientific American.—Dental Cosmos.*

Chemical Cement : By DR. A. A.

CAOUTCHOUC cement is obtainable by melting carefully india-rubber, taking care to stir well during the melting process; at the same time dry fire-clay is added, from six to eight per cent. of the weight of caoutchouc, while at last, in order to give proper consistency, slaked lime is incorporated with the mass. This cement stands the action of boiling sulphuric acid. It may perhaps not be out of place to mention here the zeiodelit, made up of nineteen parts of sulphur and forty-two parts of powdered glass or porcelain; the sulphur is molten, and the powder alluded to at the same time heated to rather above the melting point of sulphur, and is then added to the latter, while the mixture is continually stirred; it is then cast in block, and used, of course, after heating again, for various purposes as cement, etc."—*Chemical News.—Dental Cosmos.*

CLINICAL RECORD.

COLLATED BY S. S. HERRICK, M. D.

Ligation and Excision of six inches of Omentum : By U. R. MILLER, M. D., of Jefferson City, La.

May 27th, I was called to see Alick, a colored man, who had just been stabbed by another colored man, with a rough dirk, the blade of which, at the angles of the dagger point was three-quarters of an inch in width. The knife entered the left iliac region one inch above the anterior superior spinous process of the ileum, and ranged obliquely towards the navel. I found the omentum protruding six inches from the wound, and *severely lacerated*.

My friends, Drs. Fort and Chambers being in consultation, I ligated the omentum as near the internal "*paries*" of the abdomen as I could, and reducing the protruding portion, held it *in situ* by firmly fixing the ends of the ligature with adhesive strips. The only complaint of the patient was a pain at the umbilicus. He had previously been very sick, and had thoroughly evacuated his stomach.

We put him at once upon calomel and opium at intervals to procure quiet, and affect the system; and to be certain of speedy mercurializing the patient, we had a camphorated mercurial ointment rubbed into the axillary region and groins. The wound was dressed with a compress wet in cistern water; and ordered that it be kept wet.

On the 28th, A. M., there was irritative fever characterized by a red, dry tongue, and a quick pulse, 105 per minute. In the evening this irritability had subsided; and the patient was in good condition, with pulse 85.

On the 29th, A. M., his bowels were a little swollen, and tender. I added a nitrous antimonial solution to the prescription, and ordered an enema of warm water.

On the 30th, his bowels were yet more swollen and tympanitic; had not moved since the day of the inception of the wound; and he had vomited a quantity of green bilious matter, and was very thirsty; and the lips and internal surface of the wound were dry. I directed an enema of warm soap and salt water, and to be repeated until his bowels should be moved, and stopped the nitrous antimonial.

On the 31st, I found my patient in good condition; he had not vomited since yesterday morning; his bowels had moved, and the flatulent distension had subsided.

June 1st. I found him slightly ptyalised, the wound filled with a hard dry scab; integuments puffed around the wound, and complaining of pain extending through the left lumbar into the left hypochondriac region. I opened the wound by carefully dissecting out the scab as close to the ligature as could be done without disturbing it.

On the 2d, I found the wound discharging a healthy pus; pulse 65; secretions good; tenderness quite gone; pain relieved; tumor assuaged; and ptyalism fully established. I stopped the mercurial powders, and put him on the chlorate of potash.

On the 3d I ordered an enema.

On the 4th, I found my patient in splendid condition; pulse 65; I have allowed him beef-tea for two or three days, and it is continued. From this time to the 11th there was no change worthy of note, but gradual progress to health, and strength. I allowed him to get up and sit awhile, and he was not afterwards confined to bed.

On the 23d, there being no further necessity for the ligature to remain, I ran a well adapted scissors down, clipped it, and withdrew it. It was an easy operation, although it was imbedded in a granulating surface. A prolific granulating surface surrounded the lips of the wound, which I ordered touched with a solution of the nitrate of silver, morning and evening.

On the 27th my patient called to see me, and I pronounced him well. He took during treatment, about six grains of calomel, four grains of opium, one quarter of a grain of tartar emetic in a nitrous mixture, and, after he was well ptyalised, about a drachm of the chlorate of potash to control it.

I would remark that the protruded portion of the omentum being severely lacerated, it would have been folly, fatal to the patient, to have returned it into the abdomen. To have ligated it just above the lacerated parts, and returned the balance, would have greatly diminished the patient's chances for life, because the very contact of air for an hour, and other unavoidable causes of irritation while protruding, must itself be considered a serious lesion to a large, serous and vascular membrane.

The "pocketing" of the stump within the lips of the wound, effectually excluded the air from the peritoneal cavity; and it is a question of pathological and practical interest, whether the chance of the patient for life was not as good as it would have been in a like case of protrusion without laceration of the omentum, in which the surgical treatment would have been simply to have returned it within the peritoneal cavity; but, in such a case, the returned portion would be more or less irritated, and the air could not be perfectly excluded.?

The success of this case, without any very unfavorable symptoms, is certainly greatly to be attributed to the fact that we took the first step in the race; carefully guarded the reacting forces, and prevented the setting up of inflammation; and by assiduous watching did not permit ourselves to be hoodwinked by the enemy's most insidious approaches, so that he never gained more than a feeble irritative fever, and a slight tenderness and tympanitic condition of the bowels, which soon disappeared; and it is more than probable, that even around the ligature itself, local excitement did not exceed that of plastic effusion, and healthy

granulation. The excised portion was probably a fold of the greater omentum.

Operation for Injury of the Foot. Reported by PROF. W. S. MITCHELL, New Orleans School of Medicine.

ANTONY RISK, æt. thirty-six, native Prussia, in Feb., 1867, had his right foot crushed between the floor and screw of a cotton press. The external portion was terribly mangled, involving the loss of a large portion of the foot.

It was decided to operate immediately; all the tarsal bones were removed except the astragalus, or calcis, and internal cuneiform, and all the metatarsal and phalangeal bones, except those of the great toe. Complete union of the stump was secured in eighteen weeks, with a very fair use of the limb. He walks without a stick, and with a scarcely perceptible limp.

Galveston City Hospital.—Case reported by WM. A. M. CANBY, Student of Medicine.

JOHN Flynn, aged 25, nativity Ireland, was admitted into City Hospital on July 16th, 1868, at 11 A. M. This patient, having been employed in building the Central Rail Road, (about 150 miles from this city,) through a malarial region, was, with many others, attacked with Intermittent Fever; received no treatment until arriving at the hospital. Patient represents himself to have had fever several days before entrance; upon admission he was found to be in a slight febrile condition; a mercurial was administered, which produced, two or three evacuations from the bowels, followed by a distinct remission of fever; on next day, quinia sulphas was administered, and with apparent improvement to his general condition, until the third day, at which time the patient complained of much pain over the right axillary region: upon examination, presented slight tumefaction over seat of pain, but little redness. On fourth day, slight fluctuation; bistoury was introduced, and an escape of ichorous offensive pus followed, quantity several ounces; inflammation extending, patient presenting an anaemic condition, with considerable fever of an asthenic character; also, some cerebral disturbance. He was ordered muriatic tinct. iron with potassæ chloras every two hours, in full doses; tinct. iron applied over inflamed surface. This treatment was continued with evident improvement in patient's condition; his appetite and digestion were both good, with daily evacuation from bowels. The inflammation continued slowly but steadily to progress, attended with much pain. On tenth day, line of demarcation separating healthy from diseased surface,

was fully marked ; sloughs not sufficiently detached until about thirteenth day, appetite and digestion still good; finally, on removing the slough, which extended to the lower edges of the floating ribs, pectoralis major and serratus magnus muscles, presented a healthy appearance ; immediately in the axillary space there was a discharge of unhealthy pus, extremely offensive. Wound, after sloughs were removed, was dressed with Listar's carbolic acid, and linseed oil mixture ; iron treatment continued. On fifteenth day diarrhoea supervenes ; patient dies eighteenth day. This case was diagnosed as phlegmonous erysipelas, although there was not that boggy feeling over diseased surface characteristic to that disease.

Cardiac Dropsy : By S. C. MARTIN, M. D., Port Gibson, Miss.

I WAS called in haste, Aug. 3d, 1867, at night, to Mr. M—, who was reported to be in a dying condition. When I entered his room, found him sitting in his chair, panting for breath, and covered with a cold clammy perspiration. His abdomen and legs were enormously distended with water, and his pulse about 120, was feeble, and apparently sinking from oppressed respiration. The doors and windows were thrown open, and frequent doses of ammonia given to sustain the system while under the influence of an active hydragogue cathartic. Returned next morning, and found patient much easier. Cathartic had brought away large fecal accumulations, and afterwards discharges of thin watery consistence. I now made a careful examination of patient, and concluded, from the venous engorgement and other physical signs, that the principal source of difficulty was tricuspid regurgitation from dilatation of orifice, but as there appeared to be unusual impediment in the pulmonary circulation, I was led to believe there was also derangement of the mitral valve, produced probably by the same cause. After ascertaining the history of the patient and his disease, was convinced that the dropsy originated in violent over-strained cardiac action, and that the first step in the progress of the affection, caused, to a great extent, the succeeding steps, and that consequently, if the water could be drained off promptly without endangering the patient's safety, the constrained organs might rebound to their primitive condition, and re-accumulation be thereby prevented. I therefore, after feeling my way for a few days, instituted the following treatment, which, strange to say, I never had occasion to change during the continuance of the malady, except an occasional omission or diminution of the dose. The appended prescriptions were used at such hours, day and night, as not to interfere with the patient's rest, or conflict with each other, and I never found it

necessary to suspend, for any length of time, even the elaterium, which I have always found to be very uncertain, and sometimes violent in other proportions or combinations :

R. Elaterii. gr. i,
Ext. colocynth grs. xx,
Ext. hyoscyami grs. iv,

M. ft. pill, No. iv. Take one every 12 or 24 hours.

R. Decoct. senegae..... Oi,
Syrup. simp..... 3iss,
Spts. juniper comp..... 3i,
Tinet. scillæ..... 3iii,
Spts. aetheris, nit..... 3vi.

M. S. 2 Tablespoonfuls every four hours.

R. Mass. pil. hydrarg..... 3iss,
Pulv. opii..... grs. viiss.
" Scillæ..... 3ss.

M. ft. pill, no. xxx. S. Take one three times a day.

R. Ammonia carb..... 3i.

Divide into chart No. xii. S. Take one every six hours.

Six weeks after this treatment was instituted, I found my patient's abdominal measurement to have fallen from forty-nine to thirty-five inches, and his legs were more like pipe stems than anything else.

During this active medication I kept his apartments well ventilated and himself well *nourished*, dosing him as often with soups, soft-boiled eggs, and oysters, etc., as with physic, adopting the quantity and quality of food to his taste, and digestive abilities.

He often complained of my tyranny, but never faltered in his submission to my requirements. In three months I thought it would be safe to commence tapering my doses, which in six months were entirely stopped, and patient put on his good behavior, and on good nourishment.

It is now six months since he took the last dose of medicine, and he presents no trace of disease. The action of the heart seems to be normal, and his respiration good. He is now walking the streets, and engaged in his ordinary business affairs.

I attribute his recovery to a good constitution, and the *combination* of remedies. The elaterium and ammonia. I think, were the most important medicinal agents, but in any other combination I do not think they would have produced the same effect.

Of course it is not every case that would bear such heroic treatment, but I think when dropsy does not depend upon some irremediable change of structure, this treatment, modified according to the requirements of each particular case, will rarely disappoint reasonable expectations.

I have pursued this treatment in other cases with almost like success, and it is on that account I confidently recommend it to the profession.

Notes on an interesting case of Craniotomy, by M. TABLER, M. D.

ON Thursday night, October 22d, 1868, I was called to attend Mrs. A., in labor with her first child. I was informed that she was frightened from a quiet sleep at 10 p. m. by the discharge of the liquor amnii. Her pains were regular, but with intervals ranging from twenty to thirty minutes. I made several examinations per vaginam, and utterly failed to find the os, but could feel distinctly the head through the walls of the uterus. I examined carefully the capacity of the pelvis, which was small, with the pubic arch narrow and much contracted. I also found the spines of the ischium projecting very much inwards, making the transverse diameter very narrow, and altogether rendering it a case I did not feel justified in acting upon without medical aid. I therefore sent for my friend Dr. Hart, who came promptly, and, on examining the pelvic canal, agreed with me that it would be a case attended with trouble, and perhaps danger.

The pains grew in rapidity and strength, but twenty hours elapsed and we were still unable to reach the os uteri. From the peculiar nature of the case, we came to the conclusion that it was premature labor, and that we would endeavor to quiet the system with opiates, and give rest to the patient. We ordered half grain doses of sulphate of morphine every hour, which promised in the beginning to have the desired effect, but at the expiration of six hours the pains returned with renewed vigor.

Now, by waiting the return of several pains, the os uteri was reached, high up, and looking toward the left acetabulum, in it the index finger was passed, and gentle traction made during each pain. The foetal head was soon guided into this depression, which was followed by very severe bearing down pains. The pains now became rapid and violent, but the progress was almost imperceptible. The presentation was the most desirable, viz., by occipito-bregmatic diameter. We used ex. belladonnae, warm napkins, &c., but without apparent benefit. At the expiration of seventy-five hours of almost unparalleled suffering, the head was found lodged firmly against the pubic projections.

The pulse ran up to 165, and perfect delirium ensued. The forceps were now applied, but the parts were undilated, and our hopes of success through their aid was foiled. Her pulse was now very feeble, and so rapid as not to be correctly counted, and all efforts on the part of the uterus were entirely suspended. On examination we found the pulsations in the fetal head had ceased, and we had every reason to believe the child had perished.

We made known to the husband the nature of the case, and then prepared for the operation of craniotomy.

I used long, sharp pointed scissors, which were carefully guided by the index finger; the head perforated and the brain removed. After collapsing the head, I brought down, with considerable difficulty, first one and then the other arm, and de-

livered a child which weighed ten pounds. The uterus was so completely paralyzed that I was compelled to introduce my hand in for the detachment and removal of the placenta. I then induced uterine contractions, by the use of fluid ex. ergot, and cold applications over the hypogastric region. Perfect rest in the recumbent position was then enjoined, and in ten hours her mental faculties were restored. She is now in the enjoyment of her usual good health.

Melanoid Tumor : Operation, etc. : By J. S. WASHINGTON, M. D., Somerville, Tenn.

ON the 10th of April last, I was requested to see Mr. Hawkins, who resided six miles north of Somerville, and found a tumor filling the entire antrum; the right nostril and the orbital cavity so much encroached upon, as to cause almost complete occlusion. He is of strumous parentage, but has always enjoyed excellent health, until eight years since, when he noticed a small tumor in his right nostril, which was treated for some time by different physicians, and removed, I believe, by one, about four months ago. It increased slowly at first; recently, however, it has grown rapidly, to its present size. Mr. H. being a man of some judgment, I informed him (as well as other physicians whom I met in consultation) that nothing short of the entire removal of the disease could afford him relief, and fully explained to him the danger of so formidable an operation, and the fact that should he survive operation, the relief afforded might only be temporary, owing to the probability of a recurrence of the disease. Satisfied that without relief from his suffering, a speedy death was certain, he begged that the operation might be performed as early as possible being willing to endure anything that his life might be spared even for a time, to his dependent family. After some deliberation on his case I determined to give him the benefit of an early operation, believing from the rapid progress the disease had made within the last few weeks, that there was but little time to be lost.

On April 29th, assisted by Dr. Alec. Jones, the patient being placed under the influence of chloroform, I made an incision from the border of the lip, extending vertically upward, by the side of the nose, to a level with the orbit of the eye, thence horizontally along the inferior border of the orbit, extending as far as the "zygomatic process" of the malar bone. After ligating a branch of the facial artery, I proceeded with a dissection of the parts. Just beneath the infra-orbital foramen I found the tumor protruding through the walls of the antrum, about the size of a five cent piece, having attained the size of a goose egg externally.

This having been carefully dissected from the adjacent soft parts, I proceeded to remove almost the entire malar bone, and

a portion of the wing of the nose. The parts were then well sponged, which arrested all hemorrhage; after which, every particle of diseased structure was carefully removed. After remaining open, and cold water applied for a few minutes, the flap was adjusted, and operation completed by five sutures which retained the parts in excellent apposition. Was now removed to his bed and cold water dripping applied. Being considerably prostrated, stimulants containing a small portion of "morph. sulph." were ordered.

30th: Reaction fully established; complains of no pain, but quite restless; pulse 112; some tumefaction about the eye; bowels moved once; I cleansed the cavity by injecting with soda water, it passing out readily through the nose and mouth, and ordered again $\frac{1}{4}$ gr. morph. sulph. and Hoffman's Anod. to be taken at intervals of four hours. May 2d: Clear of fever, cheerful and free from pain; appetite returned; rested well since my last visit; continued the above application and anodyne; discontinued morph. sulph.

5th. Found patient up and walking about the yard. Pulse 90; skin normal; tongue clean; appetite pretty good; expression more cheerful. In conjunction with previous treatment, I prescribed syr. ferri et quin. cit., with good diet.

8th. Complains of some pain in the wound, about which there is considerable tumefaction, and the areola tissue around the eye is filled with effused blood; complains of great nausea from the offensive discharge from the wound pouring into the mouth. Pulse 100; after cleansing the wound I again left. Morph. sulph. one-fourth grain doses to be repeated as often as necessary to procure quiet and rest; the bowels kept soluble with mild laxatives; powdered alum over the eye, and same dressing continued.

11th. I was sent for in haste to see Mr. H., but being absent, Dr. Warren visited him and found a well-marked case of tetanus. Temporary relief was afforded, but he died early the following morning.

*Notes of Clinical Practice in the Philadelphia Hospitals: Report-
ed by Dr. WM. MASON TURNER.*

SURGERY.

Jefferson Medical College—Service of Prof. S. D. GROSS.

CASE I.—A young man, nineteen or twenty years of age, hailing from Ohio, came here to consult the Professor. On examination, there was found a *staphyloraphy*—ordinarily known as fissured, or cleft palate. It involved only the soft parts, and was congenital. Prof. Gross had operated on the patient a few days before he had been presented to the class. The inflammation following the operation was not more than was expected, and

what was, in fact, necessary to promote perfect union. The operation performed, consisted in paring the edges of the cleft,—bringing the raw surfaces together and retaining them *in situ*, with twisted sutures, held firmly by compressed shot. Between these four or five sutures, a single *interrupted* suture was introduced. This latter was removed in five days, the others being allowed to remain in until the eighth day. A solution of nitrate of silver (ten grains to the fluid ounce), had been applied; but in case there was a further demand for stimulation of the parts, the solid stick would be cautiously used. Good food, and general outdoor exercise were now demanded. *Immediate* improvement in speech could not be expected, but it would improve by constant practice, especially the practice of pronouncing the letters of the alphabet. The operation, however, was a success beyond a per-adventure.

CASE II.—A lad of thirteen years, a healthy-looking fellow. Prof. Gross saw him in the summer of 1867. History of the case in brief: since the boy had a tooth extracted, had suffered with his lower jaw. The Professor remarked, that he surmised, that the alveolar process had been broken from the rudeness of the dental operation. At all events, *necrosis* of the *lower maxilla* had followed. At the time the lad first presented himself, the parts were scraped well, and a small quantity of dead bone removed, but the improvement was only temporary—an abscess had formed, and at last the boy came back again. An operation was determined upon. After anaesthesia had been induced, a probe was introduced through the outside fistulous opening, into the wound, and the surface of the maxilla, very much roughened, was detected. The parts were next laid open by a free incision, and quite a large piece of dead bone taken out. Every thing of a semi-organized, granulous and hurtful growth, was completely cleaned away—the Professor laying great stress on this precaution. Warm solutions of potass. permang. or liq. sod. chlorinatae, were directed.

CASE III.—A little girl of six or eight years. Had an *extra* thumb on the right hand. This thumb had two phalanges. Disarticulation at the joint was performed, a posterior and palmar flap being made. Prof. Gross predicted union by first intention.

Jefferson Medical College. Service of PROF. GROSS:

CASE I.—A young girl of twenty, or thereabouts. This patient presented, on the left side of the neck, and directly beneath the lobe of the ear, spreading over the sterno-cleido mastoid muscle, a tumor of a very interesting character. Prof. Gross thought this growth was congenital, inasmuch as it had appeared in infancy. The tumor could be lifted up from the structures below, and it had an earth-worm or varicose feel. Pressure on it gave rise to venous turgescence—not in the *subcutaneous* vessels—but from veins deeper—below them. The tumor, Prof. Gross re-

marked unhesitatingly, was too soft and flaccid, to be confounded with an adipose growth. After a careful examination, he diagnosed the trouble to be a *venous tumor*, dependent on a varicose condition, of the veins of this region. In such a case, he said, an operation was demanded, which in a few words is to wit : Cut down through the integumentary coverings, so as to reach the varicose vessels—excise them, unhesitatingly, and tie them. Subcutaneous injection of the astringent salts, as of iron—the sulphate or perchloride, are contra-indicated, on account of their great danger. Prof. Gross said that statistics and a varied experience of many renowned surgeons, had determined that the old bug-bear of inflammation, resulting from the ligation of veins, was not to be heeded. He had often practised ligation of veins, successfully, so far as result was concerned. The operation demanded in this case, Prof. Gross thought, could be performed with perfect safety. Every operation, however trivial, he admitted, carried with it, its own danger; death had been known to result from leech bites, and from the extraction of a single tooth. But while we admit the possibility of, we must not reckon on, or be deterred by chance of danger in such operations.

The operation was then proceeded with. Anesthesia was induced, and a curved incision was made over the tumor. The operation was tedious, and necessarily consumed time;—but it resulted in the successful removal of the tumor.

(I am informed that two weeks after the operation, the girl was again brought before the class. The swelling had entirely disappeared, and the patient was doing well.—W. M. T.)

CASE II.—A little boy of seven or eight years. In this case Prof. Gross diagnosed *accrocid condition of the left humerus*, near the shoulder joint. The lad was chloroformed—an incision made, connecting two fistulous orifices, and some fragments of bone, quickly removed. Syringing with tepid water, twice in twenty-four hours—and (for three or four days) a poultice containing plumbi-acetas in solution, was directed for after treatment.

CASE III.—A man forty-five years old—a farmer by occupation. Had suffered since he was ten years old, with *calculus in the bladder*. On introducing the sound, a very large stone was detected. It was determined to operate at once. The *lateral* method was chosen. The stone measuring nearly three inches, by two and a quarter, was, with great difficulty, extracted. It was determined to be uric acid in its formation. Morphine (half grain) was injected hypodermically to relieve pain.

Service of Dr. S. W. Gross:

CASE I.—A young girl of sixteen, suffering from *wry-neck*. A contraction or shortening of the cervical muscles, particularly the splenius, and the sterno-mastoid, occasions a condition known as *torticollis*, or *wry-neck*. In the present case, Dr. Gross surmised that the affection had been occasioned primarily, by enlarged and inflamed lymphatic glands. When quite a child, the

patient had suffered from these swollen glands, and to give herself ease and comfort, had bent her head so as to relieve pressure on the inflamed region. She thus acquired a habit, which in time produced structural changes in the muscles—resulting in the present deformity. Dr. Gross stated that while torticollis might be congenital, yet in far the greater number of cases, it was acquired. Hence the treatment should be very especially directed to the cause. He referred to the fact, that when it is occasioned by rheumatism, Dr. Da Costa of this city (Philadelphia) had met with marked success, from the subcutaneous injection of the sulphate of atropia in *very small quantity*. The electric current is also a good remedial agent in certain cases. In the case of this young girl, the Doctor determined to divide the sterno-cleido-mastoid muscle, by subcutaneous section, and to apply immediately a suitable apparatus, so that the severed muscles, could not reunite. This was skilfully done, and the apparatus applied at once. An improvement, in a marked degree, was then immediately perceptible.

CASE II.—A little child of three years—suffering with a *bloody tumor* (occasioned by a fall on the pavement), *over the left eye-brow*. Generally speaking, these tumors can be dispersed under the use of absorbent washes. For instance (as was ordered in the present case):

R. Ammon. Mur.....	ij.
Aceti.....	
Aquæ	aa $\frac{3}{4}$ vj.

M. To be applied all the time.

In cases, however, where the blood is not absorbed, a knife is required (a tenotome) to empty the sack or cyst; afterwards well adjusted compresses and a bandage.

Pennsylvania Hospital, Surgical Clinic.—Service of Dr. D. HAYES AGNEW:

CASE I.—Young negro woman, aged 25 years, suffering from an affection of both eyes, which on examination proved to be *occlusion of the pupil* in the left eye, and a *soft cataract* in the right. The girl attributed her condition to exposure, necessitated by her occupation as a house-servant. The patient did not appear to be of a serofulous diathesis; nor, according to her very positive statement, had she ever had a syphilitic or rheumatic affection. Dr. Agnew determined, as regarded the left eye, to perform the operation of artificial pupil, which was speedily done, *secundem artem*, and on the right eye, the operation for cataract by solution. This was speedily performed—a Hay's knife being used. The blade was entered just behind the corneo-sclerotic junction, carried on until it was seen in front of the cataract; its edge was then turned against the cataract, which was thoroughly sliced up, and left to the solvent powers of the surrounding humor.

CASE II.—A middle aged woman, suffering from *fistula lachrymatis*. Dr. Agnew remarked that sometimes this affection could be checked by the use of weak solutions of zinci. sulph., or argent nitrate, in a menstruum of rose water,—and the subsequent cautious employment of probes; but in this case too much time had elapsed (three months), to render it practicable. He determined to operate at once. He divided the nasal stricture, and introduced a style.

PRACTICE OF MEDICINE.

Service of Dr. J. W. DA COSTA.

CASE I.—A patient suffering from *pleuro-pneumonia*. Some six years ago the man had an attack of pleurisy, in the left side. Since then, on catching a cold, however trifling, he has experienced severe pains in that side. The man was now about forty years of age. On a close examination, the Doctor decided that the diagnosis was pleuro-pneumonia. The man was weak. In consideration of this, and the general circumstances surrounding the case, the following plan of treatment was determined upon: Poultices to the left side—quinine, beef-tea, eggs and whisky; besides this, small doses of potassium iodide, with a few drops of tinct. opii. deod., in a spoonful each, of the acacia mixture, and the neutral mixture—the treatment thus being sustaining, absorbent, diuretic and diaphoretic. Had this patient been robust, with plenty of blood,—wet cups over the affected organ, and mercury in some form, as an alterative and absorbent would doubtless, have been employed. But such a plan, was clearly contra-indicated, in the present instance.

CASE II.—A woman aged 36. A very interesting case. Had already been in hospital some time. When a healthy woman, she had exposed herself unnecessarily, to inclement weather—and had been attacked with pains in the back, which probably had been mistaken for rheumatism. But by closely watching her case, it had been determined almost incontestably that she was suffering from *spinal meningitis*. Before presented to the class, she had already been subjected to treatment. The iodide of potassium was first exhibited, then the bromide—then ergot with belladonna; but without success. The spine had also been pustulated with tartar emetic ointment. When presented to the class, however, she was under treatment of opium in decided doses, and bromide of potassium in *very large* doses (thirty grs. ter in die). The case will be again presented to the class.

(I have on hand a considerable number of interesting cases from the ably conducted clinics of Prof. Stillé of the University of Pennsylvania—these cases including *chronic softening of the anterior columns of the spinal marrow*. Several cases of *aortic aneurism* *femphysema of the lungs*, *ulcerative stomatitis*—*motor paralysis* etc. etc., but lack of space, prevents me from giving them.

EDITORIAL AND MISCELLANEOUS.

To Our Patrons.

In presenting to our patrons the first number of a new volume of the New Orleans Journal of Medicine, we avail ourselves of the opportunity to return to them our thanks for the flattering reception which they have been pleased to extend to our effort, and we take this occasion to renew a promise made in the first number of the consolidated Journal, to spare no effort to make the Journal in every respect a first class quarterly.

In accordance with a notice published in the last number, the price has been reduced from six to five dollars, thus making the Journal equally as cheap as any Journal of the same character published in this country, and, besides, for the convenience of such subscribers as may wish a weekly Journal, in addition, we have made arrangements by which we can furnish the New York Medical Gazette at the very reduced price of \$2 per annum—or six dollars for the two Journals.

In order that this reduction might not entail a loss, it has been necessary to establish a positively cash basis of subscription; and hereafter no subscription book will be opened, nor the Journal be sent to any one, unless the order is accompanied by the subscription price.

To those who are still in arrears, we again give a gentle reminder that as we have used our utmost efforts to fulfill our part of the contract, they should at least endeavor to fulfill their part by remitting at an early day. The same proposition is now renewed, which was made sometime since, to those who find it impossible to forward the cash at once, that is to close their old accounts by note, as it is our wish to dispense entirely with a subscription book.

For the convenience of subscribers, arrangement have been made by which they can obtain through this office medical works, journals, etc., at publisher's prices, free of postage.

Language of Prescriptions:

In this age of progress it has become fashionable to believe nothing without the testimony of our senses, or proof equivalent to a mathematical demonstration. Accepted principles, venerable with the faith of centuries, are coolly swept away to make room for the latest sensation, and the rejection of old ideas is thought to be almost as meritorious as the invention of new ones.

In the midst of this restless spirit of inquiry and skepticism, it is not strange that Medicine should come in for its share of innovation. "From the time beyond which the memory of man

runneth not to the contrary," it has been customary for physicians to write their prescriptions in the Latin language, and now the propriety of this course is questioned as gravely as if it had never before been thought of, and no reasons ever existed for its adoption. Of one thing we may be certain, that for every fact that exists there must be some good reason, or we should not find it so; but this does not satisfy the inquisitive spirit of the age, which is always meddling, and ambitious to upset everything capable of being demolished, no matter whether the successor be better or worse. In justice, the *onus probandi* belongs to the reformers, but iconoclasts are not in the habit of giving reasons for a thing; this point is therefore waived, and they are requested to give attention to some which are as forcible now as ever.

It is well known that every constituent of the *materia medica* has its scientific name, by which it is recognized throughout the civilized world, for it is invariably a Latin term, whether animal, vegetable or mineral. The same things also have their vernacular terms, generally different from the scientific, varying in the different spoken languages, and often different terms are applied to the same within the limits of the same language. On the contrary the same vernacular term is applied by different communities to various substances, which often leads to confusion, and might result very seriously in a prescription for medicine. We shall now illustrate what might be the probable results in this confusion of terms.

The *spirit. ether. nit. and potass. nitratas* are both called *nitre* in our vernacular, though not by the same individuals. The *apocynum cannabinum* and the *cannabis indica* are both called *indian hemp*. The *cimicifuga racemosa* and the *actea Americana* are both called *cohosh*. *Tinctura opii* is not the only preparation bearing the name of *laudanum*.

No less than seven different plants are called *snakeroot*, there being two each known respectively as *black* and *button snakeroot*; besides, the *serpentaria*, the *polygala senega* and the *asarum* possess this popular name. *Antimonii et potass. tartarus* and *potassae bilartras* are both called *tartar* by some persons, though not the same. The *datura stramonium* and the common *crab-apple* are both called *thorn-apple*. The *hydrastis* and the *xanthorhiza* are both called *yellow root* with equal propriety. The *conium maculatum* and the *cicuta virosa* are both called *hemlock* as well as *cicuta*. The *belladonna* and the *dulcamara*, both belonging to the solanaceæ, are known by the common term of *nightshade*. Besides, there are two essential oils, each bearing the names both of *origanum* and *marjoram*, one being officinal; two plants are known as *prickly-ash*, and two as *rosemary*.

It will be seen, therefore, that the use of the vernacular terms is liable to give rise to confusion and very serious mistakes, all of which are obviated by the use of the officinal names.

Besides the advantage of perspicuity, the writing of prescriptions in Latin gives better opportunities for using abbreviations,

so that they can both be written and read more rapidly—often a consideration of some importance.

The air of mystery which a Latin prescription carries is made an objection, as if it savored of pedantry, or something worse. It often really serves a good purpose, in defeating the idle curiosity of people who had better not know what medicine they are taking. When it is proper for them to know, the physician can tell them; but he ought to have some means of preventing it, if necessary, and this would be difficult with a prescription written in English.

It is a great advantage in a large city, where a variety of languages are spoken, to have a language understood by all the physicians and apothecaries alike. It is evident that the discontinuance of the Latin in prescriptions would deprive us of the only standard which is susceptible of general adoption, and often put people to the inconvenience of sending to a distance for medicines. As it is, a German or French apothecary, not understanding a word of English, can accurately fill any properly written prescription, and copy the English directions for administering the remedy, without knowing their meaning; in like manner an American apothecary with the prescription of any foreigner.

It is alleged that most physicians' Latin prescriptions are written in defiance of the simplest rules of inflection and syntax, and very probably would be unintelligible to Cicero and Horace, could they be brought to life in a modern dispensary. We do not deny the truth of the allegation, and have no excuse to make for it. We believe that a knowledge of Latin, sufficient to qualify one to write a prescription grammatically, should be required of every medical student before matriculation. This would serve not only to facilitate his mastery of anatomy and *materia medica*, but would secure a more thorough acquaintance with our own language, and spare the medical body the discredit of much of the stuff which its members inflict on an unoffending public, under the delusion that it is English.

The same reasoning which demands the discontinuance of Latin in prescriptions, would soon require its banishment from the language of science and the substitution of vernacular terms, to bring them within the comprehension of all minds. This plan would result like all other schemes for bringing mankind to a common level: there is only one way practicable, and that is to level all down to the plane occupied by the lowest.

THE attention of our readers is invited to the facilities which will be afforded this spring and summer to Medical Students, for continuing their studies after the close of the regular sessions of the Colleges. The corps of Adjunct Professors of the School of Medicine, it will be seen, propose to give a Systematic Clinical

and Didactic Course, for the particulars of which we refer to the circular enclosed. The advantages offered are equal to those found anywhere in America, and the gentlemen who have thus undertaken to render those advantages available to the Student, are well known to be fully competent to the task.

We are glad to see also that the matter of systematic office and private instruction is receiving special attention, as will be observed by a reference to the card of Dr. Edmond Souchon and that of Professors Logan and Mitchell.

Death of Doctor Joshua Gore.

WE have the sad intelligence of the death of Dr. Joshua Gore, of Bloomfield, Kentucky. He died at his home on Friday, the 6th inst., of paralysis, after an illness of only a few hours. His sudden and untimely death has cast a gloom over the community wherein he dwelt, which will not soon be dispelled, and a wide circle of friends is left to mourn his loss.

He was consigned to his last resting place on Sunday, by the Masonic fraternity, of which order he was an old and honored member. His bereaved family have our deepest commiseration.

He was justly ranked among the first physicians in the State, and he was no less celebrated for his genial deportment as a gentleman. In the late war he was with the South, and served with distinguished honor in the capacity of surgeon. While in the service, he founded and for a long time had charge of the famous Bragg Hospital, which was first established at Ringgold, Ga., and when the Southern army was crowded back, removed to Newnan, in the same State, and then again it was moved to Americus. Just before the fall of Atlanta, he was appointed post surgeon at that place, and when the city was evacuated he was assigned to the same position at Macon, which he continued to fill, with marked ability, until the close of the war.

Many a soldier now living has reason to remember him with the kindest gratitude, especially among the Kentuckians, who generally fell to his care, and deep will be their sorrow when they learn that he is no more.—*Ex.*

REVIEWS.

Remarks on Dr. Williams' Article on Quinine in Croup, and on the Treatment of Congestive Chills: By J. STAINBACK WILSON, Cypress (near Houston), Texas.

SINCE the publication of my article on the "Modus Operandi, and Therapeutic Action of Quinine," in the New Orleans Medical and Surgical Journal, for Nov., 1867, I have been led to believe

that the views advocated in that article are not generally received, or, at any rate, not acted on by the profession. Of course I could not be so vain and presumptuous as to entertain the idea, for a moment, that the views of an individual so humble as myself, could shape and control the practice of the great medical world. But, being firmly convinced, from actual clinical experience, that quinine is the *great equalizer* of the circulation in all local congestions, I trust I will be excused for again calling attention to this important subject. And in doing this, if I find out the errors and inconsistencies of some, I do it in no captious or fault-finding spirit, but only for the maintenance of what I deem to be truth.

In this Journal for January, 1868, I find the following :

"Dr. D. W. Williams, of Liverpool, communicated the following to the British Medical Journal, on the use of quinine in croup : In 1862, I examined the tracheæ of three children who died of croup, and found the mucous membrane covered with a yellowish white substance like gruel, muco-puriform matter, the membrane itself being reddened. A crow-quill could have been passed down the tube without touching the substance which lined its walls. There was nothing like blocking, nothing like tubes of false membranes (lymph), yet my little patient died of slow suffocation.

"While thinking of these cases, one of my own children took croup ; the usual remedies were adopted, but in a few hours the result could be but too easily foretold ; she was slowly choking. The restlessness and anxiety so well known was great ; and I asked myself these questions : "Is this child dying from inflammation and blocking of the tracheæ or from a blood-poison, which manifests itself in local inflammation and spasm ?" Inclining to the latter opinion, I gave her a grain of quinine, a large dose for a child twelve months old. In twenty minutes, the relief was surprising ; the restlessness etc., abated. In an hour a second grain was given, and the child fell asleep, and made an excellent recovery—the quinine being continued in smaller doses. Since this, I have treated several cases in the same way, with similar result. In bronchitis and pneumonia also I find quinine of great value when the distress is out of proportion to the amount of disease."

Now, in the first case, if the "little patient died of slow suffocation," and if "there was nothing like blocking, nothing like tubes of false membrane," as asserted by the writer—what was the cause of the slow suffocation and consequent death ? I think it must be evident, that the death by apnœa was caused by congestion of the trachea, and the lungs, and perhaps the larynx.

The second case, one of his "own children," I think fully confirms this view. Our writer acting in the presumption that the child was dying from a blood-poison manifesting itself in local inflammation and spasm, gave one grain of quinine, and "in twenty minutes the relief was surprising," etc. Now, while quinine has

an equalizing effect on the nervous, as well as the vascular system, it can hardly be classed as a direct antispasmodic, and certainly no one will contend that it could subdue a local inflammation in twenty minutes. I think it is evident then, that the relief in these cases, was due to that same wonderful equalizing and anti-congestive action which characterizes quinine in all those diseases in which there is local determination of blood, or a lost balance of the circulation. Hence its "great value" in bronchitis and pneumonia, to which I alluded in my former article; and in which diseases it is so strongly recommended by your writer, "when the distress is out of proportion to the amount of disease," that is, when the inflammation bears no proportion to the dyspnœa, which latter is caused by the congestion more than inflammation.

But my belief is, that quinine is not only good for congestions, but likewise for inflammations. For there must be congestion, hyperæmia, or lost balance of circulation, in all local inflammations. Yet, as highly as I esteem quinine, I would be slow to admit that it could remove inflammation in twenty minutes; or even that it could so far relieve it, as to give rise to such wonderful effects as that reported by Dr. Williams, in so short a time. I think it must be manifest, then, to every one, that the marked relief from the first dose was the result of the equalizing action of the quinine, and that the subsequent and entire relief was brought about by the removal of both the congestion and inflammation, by the continuance of the same potent agent. It will be noticed that our writer mentions no other remedy. One word as to the dose. He seems to think that one grain is a large dose for a child twelve months old. In his case it seems to have been sufficient, but I have found that the proportionate dose is larger for children, than some other medicines considered to be active. Certain it is, that there is an antagonism between the state of congestion and the action of the remedy; and this antagonism must be overcome, and only the surplus or excess of the medicine can be effectual in relieving the congestion. Yet, I would not be regarded as an advocate for the enormous doses recommended by some. I have generally found from five to ten grains to be sufficient for an adult.

In conclusion, I will add a few remarks on the use of quinine in congestive chills.

Judging from the published evidence, I think the inference is fair, that the mode of action of quinine is not yet fully understood or appreciated, in this form of congestion, though so long and extensively used. All of our standard writers recommend bark and quinine, as antiperiodics, during the intermission. But, except Bell and Stokes, I know of no writers on the Practice of Medicine, who decidedly and unequivocally recommend quinine in the *cold stage* to remove the congestion and hasten reaction. Doubtless many of our Southern physicians follow this practice,

but I cannot remember seeing any cases reported, where it was strongly urged as the *very sheet anchor* of safety—the *unum remedium*. Some of our late treatises on Practice may advocate such a course, but it has not been my fortune to see them.

Most writers recommend strong stimulants internally, such as brandy, capsicum, ammonia, etc. My experience has taught me that such agents are, to a great extent, useless, if not dangerous: at any rate they are unreliable; and to repose confidence in them in these dangerous cases of congestive chill, to the exclusion of quinine, I regard as unjustifiable tampering with precious human life. True, having early in my professional career learned the wonderful virtues of quinine, I have never used internal stimulants to any great extent, but where I have used them, I have found them to increase rather than diminish the coldness. My experience in the treatment of the malignant forms of malarial fever has not been inconsiderable for the past twenty-three years, and my reliance in congestive chills has been mainly on quinine—in from five to ten grain doses in combination with one-eighth of a grain of sulph. morphine, repeated at intervals, according to the urgency of the symptoms.

The morphine adds greatly to the diffusive equalizing effect of the quinine. With this I sometimes use alcoholic stimulants and capsicum in moderate doses, but the main dependence is on the quinine. Ether and chloroform, as recommended by Dr. Procher, would doubtless be better than any other stimulant.

While internal stimulants are unreliable, too much cannot be said in favor of external stimulating applications. The best of these is a pediluvium of hot water and strong ashes, continued until reaction takes place, or as long as the patient can bear the fatigue while lying in bed. At the same time, cold applications should be made to the head, chest, abdomen, or any other part where there is preternatural heat. In this way I have treated with the most gratifying success the apoplectic and epileptic forms of congestive chill, and the choleraic, including profuse haemorrhage from the bowels, excessive vomiting, cramps, etc. This plan has, in short, been equally successful in the pulmonic, haematuric, algid, and in fact in every variety of this protean disease, where the vital powers were not too much prostrated to respond to the action of *any* remedy.

Did my limits permit, I might now enlarge on the magical efficacy of quinine in congestive haematuria, and in some other forms of anomalous congestion. Finally, I cannot do better than to quote a paragraph from Bell and Stokes, which I think I retain correctly in my memory, and which has been of more practical utility to me than any one thing in all my medical reading. Treating of congestive fever they say: “Neither the stupor of coma, nor the ravings of delirium, nor the icy coldness, nor the burning heat, should deter us from the use of this (quinine), the *febrisugum magnum, the true curative agent in congestive fever,*”

Minnesota as a Climate for Consumptives.

WE would call attention to the valuable communication of Dr. B. Mattocks, on the climate of Minnesota, published in the September and October Numbers of the Boston Journal of Chemistry.

This distinguished physician of St. Paul, has devoted much time to the study of hygiene and climatology, with special reference to consumptives. Being the Superintendent of the Board of Health, of St. Paul, and having the advantage of a large and lucrative practice, he has been enabled to establish many important facts in connection with his special subject.

After briefly alluding to the pathology of tubercles, he lays down certain rules for our direction :

Place the patient in a proper condition for improvement, by supporting her in removing from her way all influences of an oppressing nature. All the surroundings must be favorable—air, food, and attention. 1st. We want our patient to breathe such air as will cause least irritation, and, while suppuration is going on, with the least exertion possible. 2d. We must nourish life with food suitable.—and here, too, we must economize strength, by furnishing such food as will give the most nourishment, with the least exertion to the stomach. I consider this all-important ; it is the first to fail, it must be the first to recover. 3d. The surroundings must be pleasant. To insure this, the invalid should feel encouraged and hopeful. The liver must not be sluggish. Oftentimes consumptives improve faster with kind strangers away from home, than they do surrounded by sympathetic and grief-stricken relatives. 4th. After recovery we would not have the person forget that he has been sick, a fact too many lose sight of.

Now, in fulfilling these indications, where can a patient live with the least exertion to the lungs, and with the least irritation to the same (I do not wish to be understood as recommending no exertion of the lungs at all times ; I refer now more particularly to the suppurating stage). Or, in a word, where is the best climate, all things considered, for a consumptive ? According to the old theory of an inflammation existing, we should at once decide in favor of a warm, equable, moist climate. We should select the shores of the Mediterranean, Italy, south of France, perhaps Brazil, or Cuba. In our own country, the Southern States would be recommended. On the other hand, taking the present view of tuberculous disease,—viewing it as a condition of impaired vitality, with all the powers of life at their lowest ebb, lifeless and dispirited,—would it be safe, we ask, to send such a person to an equable climate, with nothing to cause a ripple in

the waning stream of life; with no winds, rains, or storms; climate mild and pleasant all the year round? Could you make a climate to suit yourself, would you have an equable one? Certain conditions of the lungs, with certain temperaments, require just such a climate; as certain conditions of the body require poultices, the application of heat and moisture.

A tonic, bracing air is now recommended for lung difficulties, a dry atmosphere, a healthy climate; such an one is Minnesota. The question is often asked, "Why is Minnesota a good climate for consumptives? What do you claim for your climate?" First, we claim that Minnesota is one of the healthiest, if not the healthiest State in the Union, all things considered. I conceive it folly to send a patient to India from England, to be cured of consumption, at the expense of a liver disease; or to the Mediterranean, to die of inflammation of the lungs; or to Cuba, or Florida, to die of cholera or yellow fever, or some disease of the bowels. The Mediterranean is a great resort for invalids; yet the natives to an alarming extent die of consumption. The same, I think, is true of the Sandwich Islands. In the city of Mexico they are to a wonderful degree free from phthisis; yet in other diseases they have an alarming mortality.

In St. Paul, Minnesota, in 1867, there were 251 deaths, of which about 50 were non-residents and accidents (by non-residents, I mean strangers who came here in the last stage of disease, but to die), leaving about 200 deaths by diseases among our citizens. The general average of death the world over is about 22 per 1,000 inhabitants. Now St. Paul has a population of 18,000, and her death-rate is 11 per 1,000 inhabitants, just one-half the average number of deaths. In the state at large, of course, the death-rate would be much less. Of these deaths in St. Paul, two-thirds of them are of foreign birth, and a great part of them occurred in shanties, or rudely constructed hovels. From these 200 deaths, 17 died from consumption, or one in eleven. In New York and Philadelphia, the proportion is one in six or seven. Of these 17 deaths by consumption, all but three were of foreign birth. *But three Americans, in a city of 18,000 inhabitants, died in 1867 of consumption.* Justice claims that I state these figures are but for one year, the only year of data at my command.

In the census of 1860, Oregon had the fewest deaths in proportion to its population of any State in the Union; Minnesota next. At that time, however, there were few or no women and children in the state of Oregon.

We are an inland State, away from large bodies of water; therefore we are not subject to marine or lake winds, with the exception of part of our northern border, where we claim no particular immunity from consumption.

Along the New England seaboard, including Vermont, which is on a lake, consumption prevails to an alarming degree. The deaths from this disease alone average one in four or five. The

same holds true to a great extent along the chain of lakes in the West.

Then, too, we have no mountain ranges in our State to prevent evaporation, another fertile source of consumption.

We have a soil which easily absorbs moisture. A great portion of the State is rolling prairie, which admits of perfect drainage. The soil is light, with very little clay. Neither have we a sandy soil, with fine particles of silex to be brought in contact with the lungs at every breath. We have little or no fever and ague. There were no deaths last year from that disease.

Our climate is favorable for health. Much has been said about the climate of Minnesota. No State in the Union has been more often misrepresented than our own. I find it generally believed that our winters are arctic.

In the first place, we have less moisture, a lighter rain-fall, than any other State in the Union. The average rain-fall here is about twenty-five inches; of the New-England States and New York, from thirty-two to forty-five inches; and owing to the irregularities of our land, it is at once drained off. We are so far north that the moisture that falls from November to the middle of March or first of April is in the form of snow, with scarcely a day of thaw in the meantime.

The transition from winter to spring is rapid. Vegetation in May is nearly two weeks in advance of Michigan, several degrees south of us. An observer of thirty years in the northern part of New York and ten years in Minnesota tells me that we have green peas two weeks in advance of New York. The river at this point was open from two to three weeks in advance of Lake Champlain this spring.

Our summers are very warm: the average mean is 70° , equal to the mean of States four degrees south of us. Yet as a general thing we have a cool breeze most all the time.

We pride ourselves upon our Indian summer. Our winters are cold and crispy, but as a general thing dry. I think our winter mean is no lower than that of Boston. Yet we miss those sudden changes here which chill through and through. Last winter I was walking home from a lecture with the mercury 15° below zero, and as I walked rapidly I was not particularly cold. While walking over some frozen peaty soil, I recalled walking over the same road in September several years before, clad with the same wrappings precisely, yet I thought I never was so cold. Such is the difference between a winter in Minnesota and an eastern one. While one chills you through, the other stimulates to faster motion.

A lady told me some time since, who left Alabama in December and has since resided in St. Paul, that she suffers less with cold feet here than at home, and requires less bedding at night.

The question is often asked, is not your Minnesota air too stimulating; will it not produce haemorrhage? We answer that

we think not. Perhaps in some rare instances it might have that effect, but where one instance of that kind is on record, many instances are known where haemorrhages have ceased entirely upon visiting our State. My experience with consumptives is, that air is what they want, and the more it stimulates the better. Very seldom do we hear that air is too pure, too exhilarating.

The season to visit Minnesota is in the summer or late spring months, i.e., from the south; from the Eastern States it does not make so much difference, although it is never well for an invalid to leave home in the early spring. We should advise, if possible, to spend at least a year in Minnesota; and, much better, to change one's residence permanently. When a person is once attacked with tubercles, even though they be cured by a change of residence, yet a second attack is to be feared, should they be surrounded by like circumstances.

It would be easy at this point to give instances of cure performed by a residence in Minnesota, to quote from writers on the subject indorsing our climate; suffice it to say, that, as a general thing, physicians now, both north and south, are directing their patients to Minnesota, and seem to be satisfied with their improvement.

One fact never should be lost sight of by invalids visiting this country for their health. In the first place, remember what they came for; and remember, without care no climate, be it ever so healthful, will cure consumption. I have often noticed that a little improvement, "like a little knowledge is a dangerous thing." Many lives that are lost here can be traced to some foolish little indiscretion.

Once here, the more time spent in the open air the better. This admonition has already been dwelt upon by previous correspondents, and it only remains for me to call attention to their good sound advice.

We hope Dr. Mattocks will continue his investigations on this important subject, and we look soon for a volume from his pen.

BOOKS AND PAMPHLETS.

- A Hand Book of Vaccination. By Edward C. Seaton, M. D., Medical Inspector to the Privy Council. 1868. Octavo, 383 pp. Lippincott & Co., Philadelphia. A. Eyrich, New Orleans.

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From Dr. Wm. B. Atkinson, Secretary.

The Opium Habit, with suggestions as to the Remedy. Harper & Brothers. New York: 1868. Octavo, pp. 335. A. Eyrich, New Orleans.

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Doctor or Doctress. (Pamphlet.) By Samuel Gregory, A. M., M. D.

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Cases of Disease of the Nervous System in Patients the subjects of Inherited Syphilis. (Pamphlet.) By J. Hughlings Jackson, M. D., F. R. C. P.

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Proceedings of the Convention for the Organization of the Nebraska State Medical Society, held at Omaha, June 24, 1868.

Transactions of the Eighteenth Annual Meeting of the Illinois State Medical Society.

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APRIL, 1869.

[No. II. .

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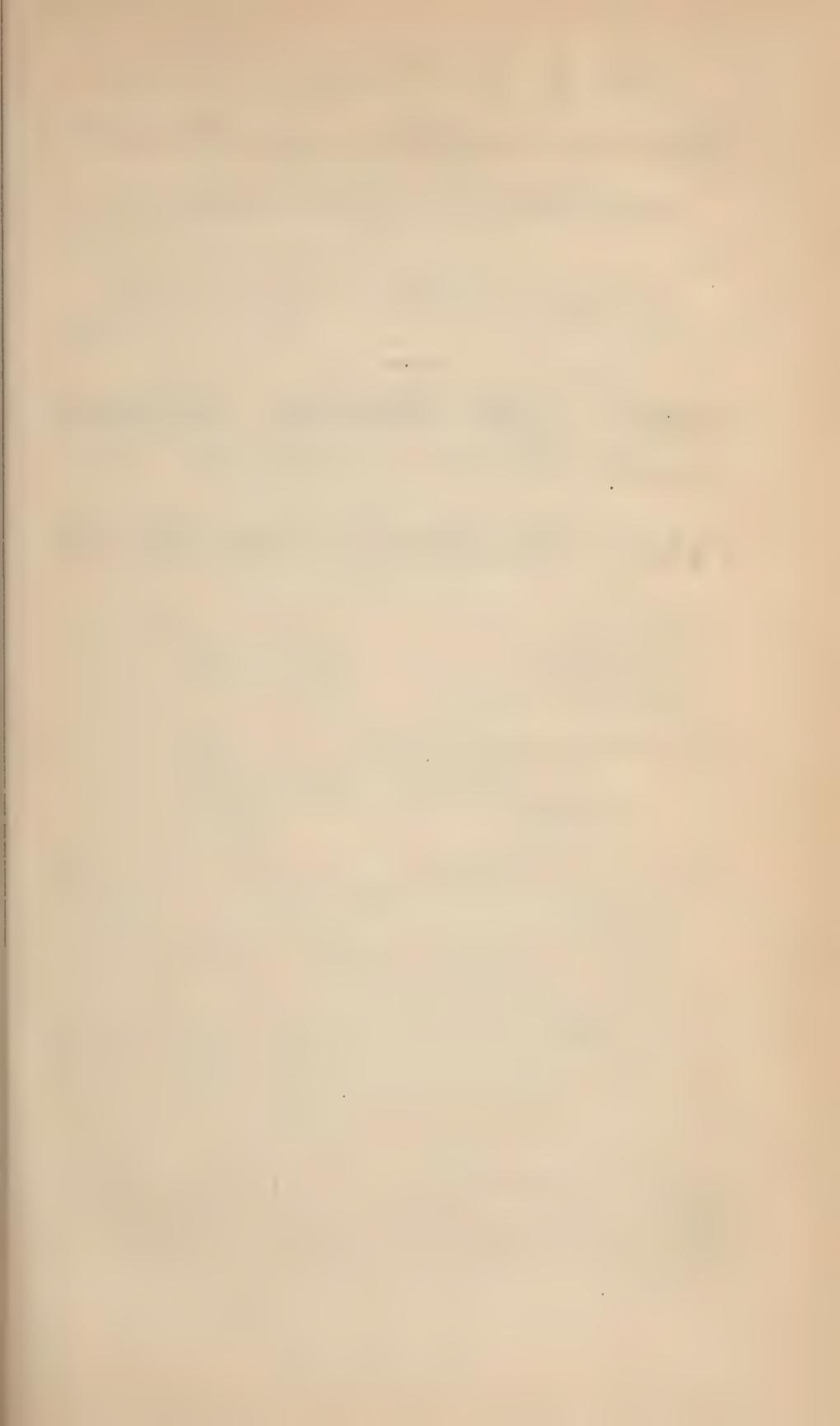
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THE
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APRIL, 1869.

ORIGINAL COMMUNICATIONS.

ART. I.—*Outline of Observations on Hospital Gangrene as it manifested itself in the Confederate Armies, during the American Civil War, 1861-1865:* By JOSEPH JONES, M. D., Professor of Chemistry in the Medical Department of the University of Louisiana.

(Concluded from January Number.)

Variations of the temperature and circulation in hospital gangrene. Marked daily variations between the temperature of the trunk and extremities. Daily variations of the pulse. The observations upon the variations of the pulse and temperature of importance in their bearing upon the nature and treatment of the disease. Characters of the urine in hospital gangrene.

From a large number of observations upon individuals selected from over fifteen hundred cases of hospital gangrene, we were enabled to establish the following conclusions :

1st. The local manifestations of hospital gangrene, are attended by febrile action in the general system.

The fever of hospital gangrene, like that accompanying other diseases, is characterized by increase of heat, increased chemical change, and increased elimination of those substances, as urea, uric acid, phosphoric acid, sulphuric acid, and coloring matters

which result from the destructive metamorphosis of the solids and fluids.

The fever appeared in many cases of hospital gangrene before the wounds had actually assumed the gangrenous state, with swollen everted edges and gray sloughing surface; after careful investigation, it appeared to be more reasonable at this stage of the disease, to consider the fever as the *resultant* and necessary accompaniment of the earliest changes in the wound, than as the *cause* of the gangrenous inflammation. Simultaneously with the development of the fever, and the constitutional disturbances, characterized by loss of appetite, depression of spirits, constipation of the bowels, and such an enfeebled irritative action of the circulatory apparatus, as denoted a depression of the vital and nervous and muscular forces, certain local changes were noted in the wounds, as the transformation of the moist florid granulations into a dark-red, glazed surface, a change or total suppression of the natural discharges of pus, increased heat and pain, and an increased congestion of the blood-vessels in and around the wound.

2d. The fever of hospital gangrene appears to be manifestly the result of the action of an organic poison.

This proposition is sustained by the facts clearly established by the preceding investigations; viz: that gunshot wounds are not necessarily attended by fever; that the fever accompanies or follows the supervention of hospital gangrene in those cases of gunshot wounds, which up to this period had been unaccompanied by febrile excitement; and finally, that the complete separation of the ragged spongy gray sloughs, and the appearance of healthy granulations, and pus in the wound, and the arrest of the farther progress of the gangrene, are certainly attended, if not preceded by corresponding improvements in the constitutional symptoms.

After the removal of the gangrene and the establishment of granulation and suppuration, the pulse becomes fuller and slower, the diurnal variations of temperature less, the normal relations between the temperature of the extremities and central organs are re-established, the capillary circulation in the extremities becomes more active, and the appetite improves, the complexion

loses its leaden, dusky, unhealthy hue, the eye expresses hope and life, and the distressed countenance becomes cheerful. Corresponding changes are observed in the urinary excretion; as the wound improves the urine progressively loses its high color, and the febrile characters, and approaches by gradual degrees to the standard of health. No crisis, or sudden change is observed in the urine during the period of convalescence, but the changes in this excretion correspond with the gradual changes of the wound.

In this respect, all the symptoms correspond, in that they all gradually and progressively improve, without any marked or sudden changes, as in certain diseases, as for example, in malarial fever.

The favorable changes just indicated, will frequently take place, even when a most extensive surface is exposed and raw, as a large portion of the back, or of the buttock, or of the thigh, six or eight inches in diameter. The fact that all the constitutional symptoms may improve, even before the diminution of the size of the wound, and whilst a large raw surface, of muscles, nerves and blood vessels and bones remain exposed, demonstrates conclusively that the constitutional disturbances are not due exclusively or even in great measure to the local irritation of the nerves exposed by the gangrene.

When, on the other hand, hospital gangrene progresses unfavorably, the constitutional symptoms, become progressively more grave, and the fatal termination is generally announced by a feeble, rapid pulse, extreme prostration—twitching of the tendons, vomiting, hiccough, involuntary dejections, and oftentimes coma.

In this disease, death unquestionably results in many cases, from the absorption of the gangrenous matter. In this case the cause of death is often profuse and uncontrollable diarrhoea. The absorbed gangrenous matter may also in certain cases excite mortification of important internal organs. Such a change may take place rapidly, and without the manifestation of any symptoms, during the life of the patient, which indicate the presence of the disease.

We conclude, therefore, from these well established facts, that in every case of hospital gangrene, which terminates favorably

or unfavorably, the character and extent of the constitutional disturbances, are due in a great measure to the absorption of deleterious poisonous matters from the wound.

3d. The febrile state of hospital gangrene is characterized by increased chemical change in the blood, and textures, increased development of heat above the standard of health, marked diurnal variations of temperature, great irritability and feebleness of the general circulation, and imperfect and feeble capillary circulation, as manifested by the marked difference of temperature between the trunk and extremities, and the inability of the extremities to maintain a definite temperature, and withstand the effects of external cold.

The periodical elevations and depressions of temperature, were intimately associated with the action of the heart. As a general rule, acceleration of the heart's action, was attended with an increase of temperature, and decrease in the frequency and force of the heart's action, was attended with decrease of temperature. The temperature fell to the lowest point in the mornings when the action of the heart was slowest.

The decomposing poisonous matters, and the products of inflammation absorbed from the gangrenous wounds after their introduction into the circulatory system, cause derangement in the blood and excite increased chemical change and consequently cause an elevation of temperature. It is well known that increased heat, tends to excite and accelerate the heart's action. If the conditions remained the same, the introduction of a morbid material (capable of exciting change) into the blood should be attended by uniform results and uniform elevations of temperature. But in man the conditions are vastly varied during the different periods of the day.

During the day time he is subjected to the stimulus of light and to an increase of external temperature, all the faculties and functions are aroused, and as the day advances, the heart responds to the increased excitement of the nervous and muscular systems. During the period of rest at night, the conditions are changed, the wastes of the working hours are repaired during those of repose; the withdrawal of the stimulus of light and the removal of the incentives to nervous and muscular exertion, is

attended with decreased action of the heart and reduction of temperature. During sleep also the respiration is not so full, and aeration of the blood is not so perfect. The skin also is relaxed, and the perspiration increased, and the reduction of the temperature by evaporation promoted.

The patient suffering from hospital gangrene, is under the action of a depressing organic poison, which alters the constitution of the blood, deranges the nutrition of all the organs, and renders the nervous system irritable and irregular in its action. The strongest men are reduced under the action of this poison, to the condition of weak, irritable children, being not only incapable of any great muscular exertion, but also of prolonged and vigorous mental efforts. The exciting agencies of the day, produce in this state an irritable and accelerated action of the circulation; and on the other hand, during the depressed state of sleep, there is a rapid diminution of temperature.

We have in these characteristics of hospital gangrene, most valuable indications for treatment—the general system must be supported by tonics and stimulants and those measures instituted which will most effectually promote the elimination of all poisonous matters from the general system, and destroy them in the local disease, and at the same time improve the quality of the blood, strengthen and equalize the circulation and invigorate the nervous and muscular systems. The following table presents the relations of the pulse, respiration, temperature, and changes of urine in this disease:

Table of Observations on the Pulse, Respiration, Temperature, and Urine, in Hospital Gangrene: Consolidated from Observations of Joseph Jones, M. D., Surgeon, P. A. C. S.

EXPLANATION: 1st column—number of case; 2d—state of wound; P signifies Gangrene progressing; A signifies Gangrene arrested; 3d—hour of day; A. M.—morning observation: P. M.—evening observation, (these observations most generally at 8 A. M. and 8 P. M.); 4th and 5th—Pulse and respiration; 6th and 7th—temperature of hand and axilla; 8th, 9th, 10th, 11th, 12th—Urea, Uric Acid, Phosphoric Acid and Sulphuric Acid, and Chloride of Sodium, excreted in 24 hours, expressed in Troy grains.

Number of Case.	State of Wound.	Hour of Day.	Pulse.	Respiration.	Temperature of Hand.	Temperature of Axilla.	Grs. Urea in 24 hours.	Grains Uric Acid in 24 hours.	Grains Phos- phoric Acid in 24 hrs.	Grs. Sulphuric Acid in 24 hrs.	Grs. Chloride of Sodium in 24 hrs.
1	P	P M	118	18 91.4	104.9	553	10.4	31.4	34.9	70.6	
	P	A M	96	18 88.3	98.8						
	P	A M	84	18 89	100.7						
	P	P M	108	18 98.2	103.8						
2	P	P M	101	26 100.4	105.8	409	5.6	36.2	22.6	25.8	
	P	A M	94	28 95..	98.3						
	P	P M	108	26 102.6	104.4						
3	P	P M	100	20 102.2	102.6	682	10.32	68.8	49.8	18.2	
	P	A M	100	24 101.1	101.3						
	P	P M	104	28 102.2	104.2						
4	P	P M	100		85..	609	16..14	40.6	37.6	130.8	
	P	A M	98		90..						
	P	A M	100		98.5						
	P	P M	120		103..						
5	A	A M	100		85..	609	8..	50.8	32.7	110.8	
	A	P M	100		96..						
	P	P M	120	20 105.7	106..1						
	P	A M	105	16 101.9	102..6						
6	P	P M	134	21 103.5	105..1	635	10..1	22.8	28.2	61..	
	P	A M			99..3						
	P	P M	100	21 102.2	102..6						
7	P	A M	100	18 99..	101..3	526	13..8	43..5	32..2	140..	
	P	P M	120	28 100..8	102..6						
	P	A M	80	16 88..	97..5						
	P	P M	98	18 101..1	102..5						
8	A	P M	96	18 97..1	99..3	395	15..3	39..3	16..8	108..	
	A	A M	80	18 88..1	98..9						
	A	A M	80	18 89..9	96..8						
	A	P M	88		84..						
9	P	A M	80	18 89..9	99..1	372	12..38	25..2	17..0	214..	
	P	P M	86		88..1						
	P	A M	80	16 88..3	100..8						
	P	P M	80	16 89..8	102..3						
9	A	A M	80	16 86..	99..	454	15..23	27..6	26..8	138..	
	A	P M	86	16 84..	100..6						
	P	A M	86		88..						
	P	P M	98		98..9						
9	P	P M	96	18 82..4	102..4	677	16..4	48..7	44..6	14..9	

Table of Observations—Continued.

Number of Case.	State of Wound.	Pulse.	Respiration.	Temper'ture of Hand.	Temper'ture of Axilla.	Grs. Urea in 24 hrs.	Grs. Uric Acid in 24 hours.	Grs. Phosphoric Acid in 24 hrs.	Grains Sulphuric Acid in 24 hrs.	Grs. Chloride Sodiu'm 24 hrs.
11	P P M	108	18	103..	103..5	404	9..3	43..8	23..	19..3
	P A M	96	18	94..	101..75	785	22..	51..	53..	64..7
	P A M	94	18	90..	99..					
	P P M	108	18	103..	103..5					
	P A M	90		80..	100..					
12	P A M	100		95..	100..					
	P P M	120		99..	101..5	364	11..6	19..9	15..1	81..
13	P A M	108		92..5	100..					
	P A M	100		87..5	100..	361	16..8	28..	18..	62..
	P P M	104		88..5	101..					
14	P A M	94		89..	100..					
	P P M	100		93..	101..5	486	16..8	31..6	21..6	203..
	P A M	96	22	95..4	100..4					
	P P M	110	28	95..	102..2					
15	P A M	116	22	93..2	100..4	203	4..9	11..0	11..5	18..4
	P P M	118	24	100..4	104..	324	9..8	41..	20..	32..
	P P M	104	22	99..	102..6					
16	P A M	98	18	91..4	100..4					
	P P M	106	16	100..8	104..	412	7..6	54..8	16..8	46..
	P A M	108	18	95..						
	P P M	108	18	99..3	104..8					
	P A M	101	21	100..4	100..4					
17	P P M	108	22	99..4	104..	303	9..12	17..	14..	8..8
	P A M	112	18	87..	99..	218	7..7	8..5	10..8	5..39
	P A M	92		99..15	102..4					
	A P M			99..4	101..					
	A A M	84		93..4	100..4					
18	A A M	80		93..6	97..4					
	A P M			95..3	97..5					
	A A M	80		93..6	97..4					
	P A M	94	16	95..3	102..2	422	7..3	30..7	17..	180..
	P P M	100	16	98..6	101..1					
19	P A M	88	16	97..1	101..1					
	P P M			98..6	102..3					
	A A M	80	16	96..9	99..3					
	A A M	84	16	92..1	196..6					
	A P M			93..7	100..7					
20	A A M	80	16	93..2	98..9					
	A A M					498	14..8	40..4	22..	181..
	A A M					479	6..4	34..	33..	207..
	A A M					423	2..9	36..	26..	192..
	A A M					693	9..3	34..	110..	
21	A A M					512	4..8	11..3	33..4	102..
	P A M	94	20	96..3	100..3	374	10..5	12..4	20..	31..
	P P M	112		95..	102..	551	21..16	34..6	23..9	98..2
	P A M	100		73..	99..					
	P P M	104		79..	101..					
10	P A M	96	14	73..	98..					
	P P M	100		82..	101..					

DURATION OF HOSPITAL GANGRENE.

I have observed no uniform periods in the progress of this disease, to either a favorable or fatal termination.

As far as my observations extends, the duration of hospital gangrene depends upon the condition of the system and constitutional powers, at the time of the infection ; the extent to which the constitution is involved by the absorption of the gangrenous matters ; the position, relations, and functions of the diseased parts ; the rapidity and extent to which the disease progresses before it is arrested, by the powers and processes of nature, or by treatment ; the nature of the local and constitutional treatment ; and above all, upon the hygienic condition of the hospital in which the patients are treated.

Bad diet, previous exposure and hardship, together with the atmosphere of crowded, filthy camps, beleaguered cities, and filthy crowded prisons, induce a state of the system which favors the origin and rapid spread of hospital gangrene. Such derangements of the blood and tissues and in the physical and vital forces as we find in scurvy, appear to be eminently adapted to the rapid spread of hospital gangrene.

The effects of bad diet, exposure to cold and wet, with imperfect clothing, and of the constant inhalation of deleterious gases arising from animal and vegetable decomposing matter, may gradually induce such a change in the composition of the living tissues, that they are prone to disintegration, and when any poisonous agent capable of exciting rapid change, as that which produces hospital gangrene, is introduced, the physical and chemical and vital powers are so reduced, that the disintegration excited is not only rapid but wide spread. We might call this an unstable condition of the chemical elements and physical and vital forces of the living system, and with some show of analogy compare it to that of certain unstable compounds as the iodide of nitrogen and chloride of nitrogen, which are rapidly altered even by mechanical motion.

It is manifest that when such a state of the system has been induced, the spread of gangrene will be far more rapid and extensive, and the convalescence will be more tedious than in healthy constitutions. And even under the best local treatment, the

recovery is *necessarily tedious* in constitutions broken down by the agencies just specified, and by habits of intemperance and vice.

Even when the constitution is vigorous and healthy, before the infection, the absorption of the gangrenous matter and its products, may induce a state of general derangement and depression, similar to that just alluded to, as resulting from the causes which may be considered as extraneous and accidental. When the system has been once thoroughly poisoned by the matter of hospital gangrene, the recovery will be tedious if not exceedingly doubtful under the best local and constitutional treatment.

The natural temperament appears to exert an important effect upon the progress of hospital gangrene. All things being equal, the disease will be most readily managed and convalescence will be most rapid in the nervo-sanguine temperament. Men with black hair, and eyes, and dark sallow complexions of the biliary, nervo-biliary, and bilio-lymphatic temperaments, appear to suffer most in the acute stages, and to have the most tedious convalescence. One or all of these causes may tend to aggravate the disease, and prolong its course. Any system of treatment which neglects the previous condition of the system, or that induced by the absorption of the poison, and its products, should be condemned as radically defective. Thus in hospital gangrene, engrafted upon a scorbutic system, what folly would it be to treat the disease entirely by local remedies, without any attention to the derangements of the blood and of several of the important organs, and of the general nutrition of the body.

That the position, relations and functions of the diseased parts, have much to do with the character and duration of hospital gangrene, would seem to be almost self-evident. The disease is especially dangerous, when located upon, or in the vicinity of a large joint, or along the track of important blood-vessels, as upon the neck over the track of the jugular veins and carotid artery; or in the thigh over the femoral vein and artery; or in the neighborhood of important organs, as the testicles and lungs.

I have never seen a case of recovery from this disease, after the opening of the hip or knee-joints; and in fact in all cases where the elbow-joint was opened, in which amputation was not performed the result was fatal.

The exposure and consequent death, of bones denuded of flesh and periosteum by hospital gangrene, greatly prolong convalescence. A portion of dead bone, is one of the most common causes of prolonged and tedious and exhausting suppuration from wounds even after the removal of all gangrene, and the establishment of healthy florid granulations. The system may, after a prolonged struggle, finally sink under the irritation and extensive suppuration caused by a portion of dead bone, after the system has successfully resisted the most extensive and dangerous destruction of tissues by the gangrene. In such cases, nature perishes in the attempt to throw off the dead bone; or during the depressed and irritated state induced by the action of the poison, and by the inflammatory process, and the constitutional disturbances which it has excited, the stomach and bowels may give way, and the patient fall a victim to gastritis or diarrhoea.

The nature of the local and constitutional treatment, has much to do with the progress and extent and duration of hospital gangrene, for if the disease be due to the action of a certain kind of animal matter, if it be possible to destroy that matter by chemical agents, and at the same time arouse by the same means, the surrounding tissues, with healthy inflammation, it is evident that the physician possesses the means of cutting short the disease. After the arrest and removal of the local disease, the period of convalescence, will depend upon various circumstances, as the extent to which the general system has been involved, the extent of the local injury, and the condition of the wound, and the surrounding hygienic state.

But, above all, the duration of hospital gangrene, will depend upon the hygienic condition of the hospital, and the sanitary regulations. If the hospital be crowded with wounded and gangrene cases, if it be poorly ventilated, and if but little attention be paid to the cleanliness of the bedding and utensils, the patients will be liable to constant returns of the disease, introduced through one or all the avenues of infection existing in filthy badly regulated hospitals. In such cases, patients may be cured of the gangrene several times, and finally die of a recurrence of the disease. I have seen nurses dress healthy granulating wounds with the same filthy hands, sponges and instruments, which but a

moment before had been busy in cleaning and picking the most offensive gangrenous wounds. The tendency of the disease is to a low depressed state of the nervous system, and of the general and capillary circulations, and hence *bed-sores* are exceedingly common in this disease when the patients are not properly attended to; and there is no doubt but that in the hands of inattentive and slovenly surgeons, bed-sores are the cause of most tardy convalescence and even death itself in hospital gangrene. As far as my observations extend, bowel affections, and especially obstinate diarrhoea, are much more liable to attack patients with hospital gangrene in dirty foul crowded hospitals, than in those properly regulated.

DISABILITY RESULTING FROM HOSPITAL GANGRENE.

The extensive destruction of tissue, caused by this disease, will in many cases involve the permanent injury of the affected limbs.

The character and extent of the disability will depend upon the situation of the gangrene, as well as upon the extent of its ravages.

When the disease invades tissues in the region of large blood-vessels and nerves, impaired circulation, nutrition, and even complete paralysis of the parts below the seat of injury may result. Withered, discolored, cold, contracted and paralyzed arms and legs, are sometimes seen, even at this period of the war, as the results of the local injuries inflicted by hospital gangrene. Even when the important nerves and blood-vessels are not injured, the denuded muscles which had lost their natural fibrous coverings, and even in many cases their natural tendinous attachments, during the process of healing by granulation form numerous new attachments, and the symmetry and precision of the muscular movements are deranged.

When entire muscles, or only portions of one or more muscles are destroyed, more or less contraction, according to the position and actions of the muscles will take place.

In most cases, the extent of the disability, is in no manner related to the size or depth of the primary wound. A small scratch of the surface may be attended with as great destruction of muscular tissue, as the deepest wound. The extent and nature

of the contraction, whether forwards or backwards, or lateral, will manifestly depend upon the relations and actions of the muscles injured or destroyed.

During convalescence from hospital gangrene, it requires great resolution and attention on the part of the patient, as well as the physician, to overcome the contraction of the muscles. As far as my observation extends, many valuable soldiers are lost to the service, from inattention on the part of the nurses and medical attendants to the posture of the body, and of the affected limbs during the progress of hospital gangrene. Whilst endeavoring to place the diseased limbs in the most favorable position for a perfect cure, without unnecessary deformity and contraction, it should also be remembered that there is a marked tendency to the formation of the most distressing and dangerous bed-sores in all parts subject to long-continued pressure, on account of the depression of the general and capillary circulation, and of the nervous and muscular forces, and the derangement of nutrition induced by the atmosphere and action of the poison and its organic products. The physician has also to regard at the same time, with the most scrupulous care, the proper *drainage of the wound*.

I have instituted inquiries at various times, to determine, if possible, the number of soldiers lost to the Confederate service, on account of disability following hospital gangrene, but have thus far been unable to form any approximate estimate, on account of the following difficulties :

It is evident that the field reports, furnish no materials for such an inquiry, as the patients do not remain long enough in the regimental brigade and division hospitals, to determine the results of any injury, and after the patient is transferred to the general hospital, his subsequent history is, in most cases, lost to the field surgeon.

In the general hospitals, the cases are frequently transferred from one hospital to another, and in the present system of registration, his disease and injury, with even the date and character of his wound appears anew upon the records of every hospital which he enters, so that the cases recorded in the general hospitals connected with the Confederate armies, greatly outnumber those transferred from the field.

Again, hospital gangrene, under the title of phagedæna gangrenosa, has only recently been introduced into the list of diseases recorded in the Confederate reports of the sick and wounded; thus, the first report from the general hospitals attached to the army of Tennessee, in which this disease appears, was for the month of July, 1864.

The losses from disability occasioned by hospital gangrene have been considerable in the Confederate armies, up to the present time, and will most probably progressively increase as the war with its numerous privations, and rapidly accumulating horrors advances.

The service has lost far more men from the effects of the gangrene, destroying the power and use of limbs, than from the actual number of deaths caused by this disease.

CAUSES OF DEATH IN HOSPITAL GANGRENE.

When hospital gangrene progresses unfavorably, the constitutional symptoms, become progressively more grave, and the fatal termination is generally announced by a feeble, rapid pulse, extreme prostration, twitching of the tendons, vomiting, hiccough, involuntary dejections, and oftentimes coma. Many cases, however, die without any derangement of the brain, and the patients are sensible and calm, up to the moment of death.

Deaths from hospital gangrene may result from one or more causes, as :

1st. Progressive failure of the powers, under the action of the depressing and irritating effects of a large and constantly increasing wound ; and of the derangement in the constitution of the blood, and of the nutrition induced by the absorption of the gangrenous matters and its products.

2d. Repeated haemorrhage from the blood-vessels exposed and eroded by the gangrene.

The separation of the dead parts, is almost always accompanied with more or less haemorrhage, and in the last stage of the disease, there is frequently a bloody oozing from the surface of the denuded parts.

When haemorrhage takes place from the large arteries, which

require ligation, it happens that in the severest cases, the coats of the arteries are sometimes ruptured by the ligature, and when the haemorrhage is controlled by pressure, the limbs becomes greatly swollen, and the progress of the gangrene accelerated. In such cases, whether the ligature, and the mechanical means of compression be applied or withheld, an unfavorable issue appears to be almost equally certain. The sesqui-chloride and persulphate of iron should always be used freely locally in such cases, in addition to the other measures.

When the forces have been reduced by the long-continued action of the gangrenous poison, a very slight haemorrhage will sometimes cause death.

3d. Entrance of air into veins eroded and opened by the ravages of hospital gangrene.

As far as my observations extend, death from this cause is of rare occurrence. We have already in the section relating to the changes of the blood, presented an interesting case illustrating this mode of death. By post-mortem examinations, I have been able to determine the important fact, that the blood is frequently coagulated, or rather a firm fibrous laminated clot forms in veins surrounded by gangrenous matter. This formation of fibrous clots in the veins appear to precede the erosion of their walls. And hence, by this process and provision of Nature, we do not often have the entrance of air into the veins, when they are destroyed by hospital gangrene. We have before shown, that the fibrin of the blood is increased above the normal standard, and that even in the worst cases, the blood is capable of forming a firm clot.

4th. Opening of the large joints by the gangrene.

When gangrene attacks parts in the neighborhood of the hip and shoulder-joints, or of the knee and elbow-joints, the disease, all things being equal, as to its intensity and the condition of the system, is far more dangerous than when situated upon the middle parts of the thigh, leg, arm, and fore-arm.

The opening of a large joint to the air subjects the patient to the additional irritation of the large diseased synovial membrane; and the surface for the action and absorption of the gangrene is

at once greatly increased. The gangrenous matters frequently accumulate within the opened joint, and still farther, by their putrefaction and absorption increase the danger. The membranes lining the articulating surfaces of the bones, are finally eroded by the gangrene, and the extremities of the bones themselves are attacked in their most vascular and spongy portions. When the extremity of a bone is thus opened, the gangrenous sanies may descend by gravity, or ascend by capillary action, through large tracts of sound bone; and in this way by the opening of a joint, the difficulties of any case may be greatly increased, and, in fact, rendered hopeless, unless the limb be promptly amputated.

5th. Formation of large bed-sores during the progress of the disease, and the appearance of gangrene in them.

The tendency of the poison of hospital gangrene, after its absorption, is to the rapid derangement of the constitution of the blood, and of the nutrition of the body generally; and by its action, the general and capillary circulation are greatly depressed and deranged. It follows from this that all parts subjected to continuous pressure in this disease are liable to death. Hence, the most scrupulous attention should be paid to the change of posture, and to the friction and stimulation of all parts necessarily subjected to pressure in patients suffering with this disease. I have seen a number of cases, which appeared to terminate fatally, entirely on account of the gangrenous bed-sores, after all gangrene had been removed from the original wound, in which both granulation and suppuration had been established.

6th. Diarrhoea resulting from the irritant action of the poison of hospital gangrene, upon the intestinal mucous membrane.

After the absorption of the gangrenous matter, the immediate cause of death, is, in many cases, of long standing, profuse and uncontrollable diarrhoea. In the early stages of the disease, the bowels are most generally constipated, and the use of occasional purgatives beneficial; but when the disease has continued for a length of time, and a large surface has been exposed to the action and absorption of the deleterious materials, diarrhoea of an obstinate foetid character frequently sets in, and finally carries off the patient.

7th. Extensive and rapid disorganization of the tissues, around the

original wound, beneath the sound skin, accompanied by absorption of the gangrenous matters, great nervous and muscular prostration and obstinate diarrhoea.

8th. Mortification of internal organs, induced by gangrenous matter absorbed from the local disease.

The absorbed gangrenous matter, may, in certain cases, excite mortification of important internal organs. The development of gangrene within important internal organs may take place rapidly, and sometimes without the manifestation of such symptoms during the life of the patient as would indicate the true nature of the disease.

It is probable that in many of these cases, the organ which becomes gangrenous, was previously in a diseased state, either of active inflammation or of progressive derangement.

If the poison of hospital gangrene is capable of transmission through the atmosphere, to inflamed surfaces, cases of pneumonia should never be treated in the same ward, or in close proximity with this disease.

9th. The invasion of organs essential to life, by the direct destruction of intervening structures.

When gangrene attacks the stump after amputation, at or near the shoulder-joint, the disease may progress along the cellular tissue into the cavity of the thorax, and invade the pulmonary structures, and thus produce a rapid fatal termination. I have seen the lungs thus attacked in a case of resection of the humerus near the shoulder-joint. I have observed that in those cases in which hospital gangrene attacked the lungs, the complexion immediately assumed a moist, cadaverous, sallow hue. When gangrene attacks the tissues in the groin, it may penetrate the abdomen, and speedily cause death. In like manner when the scrotum and testicles are attacked by the disease, it may penetrate the abdomen. During the present war, I have seen three cases of gangrene of the scrotum and testicles, in which these organs were entirely exposed, and even destroyed. Each case terminated fatally.

10th. Pyæmia.

It sometimes happens that after the gangrene has disappeared

from the wound, and after the appearance of granulation, and the formation of pus, this fatal disease supervenes. It is a subject for interesting investigation, to be settled only by carefully recorded cases, whether pyæmia is more common in cases of hospital gangrene, than in those cases in which the wounds present the appearance of sthenic inflammation. It is reasonable to suppose, that all depressing causes, which tend to produce such a state of the system as favors the rapid disorganization of the structures would favor the production of pyæmia.

In several cases of this disease supervening upon hospital gangrene which have come under my observation, the symptoms have been marked and distinct from the first disease, the urine has assumed a brilliant carmine tint, and after death, the veins of the diseased parts were discovered, upon dissection, to be distended with pus.

11th. Phlebitis.

12th. Various results or sequelæ of the local and constitutional effects of hospital gangrene, as profuse and unhealthy suppuration from large granulating surfaces—necrosed bones, causing irritation and keeping up suppuration, and hectic fever—permanent impairment and debility of the digestive organs.

II.—CAUSES OF HOSPITAL GANGRENE.

1st. A debilitated and cachectic state of the constitution. Such derangement of the solids and fluids as favors the production of hospital gangrene, may be the result of exposure, fatigue, bad diet and impure water; and also of the rapid or slow action of a special poison in a low, humid and miasmatous atmosphere.

If the doctrine advanced by John Hunter, that a certain degree of vital tone or energy is requisite for the formation of coagulable lymph, by which the spreading of inflammation and sphacelation will be prevented, and that when owing to deficiency of vital energy, vascular action is incompetent to the formation of coagulable lymph, these lesions will extend, and the morbid fluids will contaminate the surrounding tissues, be accepted as an axiom in pathology, and be enlarged so as to embrace the doctrine that the character and progress of inflammations will depend also upon the physical and chemical constitution of the solids and

fluids, we will have an explanation of the fact, that hospital gangrene, which was almost unknown as an American disease, previous to the present war, has, at least, in the Confederate armies, progressively increased in amount and severity.

An insufficient supply of food, as well as the prolonged and too exclusive use of salt food, not only impair the efficiency of soldiers by rendering them less capable of enduring exposure and fatigue, and by inducing that cachectic state of the system which is favorable to the development of diarrhoea and scurvy; but also render the accidents of battle more fatal by the unfavorable progress of inflammation in gunshot wounds.

In the earlier periods of the present war, the Confederate armies were composed in large measure of men who had been accustomed to an abundant and varied diet, a large portion of which consisted of animal food. Notwithstanding the unavoidable crowding of the hospitals, and the existence of all the circumstances most favorable to the development and spread of hospital gangrene, in the first months of the war this disease appears to have been almost unknown, until a change had been wrought in the constitution of the soldiers, by fatigue, exposure, and reduced rations, from which both coffee and vegetables were almost universally absent.

A low, moist stagnant, malarious atmosphere, is not only in itself favorable to the origin and spread of hospital gangrene, but it also produces in troops serving in low malarial regions, changes in the solids and fluids unfavorable to sthenic inflammation.

Thus, as I have shown by previous investigations, the malarial poison produces profound alterations in the constitution of the blood. Under its action, the colored blood-corpuscles are more rapidly, and to a greater extent, destroyed than in any other disease, with the exception perhaps of pyæmia. The fibrin is diminished, and also altered in quality.

The albumen is, in like manner, diminished. The extractive and coloring matters of the blood are frequently increased. During the active stages of malarial fever, phosphorus and the compounds of phosphorus in the nervous structures and in the colored blood-corpuscles, as well as sulphur and the compounds

of sulphur, in the muscular structures, undergo more rapid changes than in the normal state,—and phosphoric acid and the phosphates, and sulphuric acid, and the sulphates appear in increased quantities in the urine. The waste of phosphorus and its compounds in the blood-corpuscles and nervous structures during the active stages of the fever, are far greater than the supply of these elements through the blood. During the slow action of the malarial poison, as well as during the active stages of the paroxysm, important changes take place in the liver and spleen. In both organs, the colored blood-corpuscles are destroyed in large numbers, and the coloring matter resulting from the disintegration of the red corpuscles accumulates in them, and in conjunction with other changes in the nutritive process of these organs produce the alterations characteristic of malarial fever. That the chemistry of the body is still farther deranged in malarial fever, is evidenced by the changes of the excretions. Thus, during the chill, and at the very commencement of the hot stage, phosphoric acid disappears almost entirely from the urine; as the hot stage progresses, and the febrile action and heat commence to decline, there is an augmentation of phosphoric acid. But what is still more important in its bearings upon inflammatory affections engrafted upon the malarial constitution, the uric acid is either increased, or remains at the normal standard, during the chill; disappears almost entirely during the fever, and then increases rapidly and rises to a high figure at the subsidence of the febrile excitement, and often continues for days, two and three and even six times more abundant than in the normal state. If it be true that the presence of a noxious agent in the blood, as uric acid, in gout and rheumatism, will often prove an excitant to inflammatory action, then this tendency in malarial fever, to the generation of large quantities of uric acid, during the intermission, and even during the period of convalescence, is important in its bearing upon inflammations accompanying or following malarial fever.

It results from these effects of the malarial poison.

First. When inflammation is excited from any cause, in a system subjected to the influence of the malarial poison, the natural tendency is for the inflammation to assume a low form, from the altered condition of the constituents of the blood and

structures, and from the derangement in the process of nutrition, and of those physical and chemical acts by which the nervous and muscular forces are developed. It is well known that the causes which are most influential in the production of inflammation, are such as enfeeble the heart, impair the tone of the arteries, reduce the activity of the secreting organs, and debilitate the muscular and nervous forces. Imperfect nourishment also, either in consequence of the defect in the quantity or quality of the food, or of incapacity of the digestive powers, impairs the power of the system to resist the effects of deleterious and depressing agents, as cold, and produces a liability to low forms of inflammation and fever, and to various epidemic and contagious diseases.

In malarial fever, even when the digestion is unimpaired, the action of the poison, by impairing the constitution of the blood, and by deranging the nutritive processes of the different organs and tissues, and by deranging and depressing the chemical actions concerned in the development of the physical and nervous forces, produces similar results to those witnessed in ill fed and ill-conditioned beings.

The process of inflammation, whilst including both congestion and determination of blood, is essentially more complex than either or both of these conditions, and includes changes of the blood within the vessels, and changes of the relations of the capillaries to the blood, and of the blood to the surrounding tissues. The character of these changes as well as the extent and progress of the inflammation, will depend upon the constitution of the blood, the forces moving the blood, and the condition of the forces active in the nutrition of all the organs as well as of the forces especially active in the inflamed tissue. Thus when the character of the blood has been altered, and the forces depressed, the solid products of inflammation are less capable of organization, the lymph effused possesses inferior plasticity, and the effects of the local inflammation upon the general system in causing inflammatory fever, are more depressing and dangerous. As therefore the tendency of the malarial poison is to derange the conditions upon which the maintenance of healthy nutrition depends, viz., the regular supply of healthy blood possessing a

definite composition and fixed relations of its elements, and of a certain supply of physical and nervous force, and the healthy constitution of the organs and tissues, it is evident, not only that inflammation engrafted upon the system laboring under the effects, or under the direct action of the poison, must be correspondingly altered from its progress in the healthy constitution; but also that the state of the system induced by the action of the malarial poison is conducive to the origin of inflammation.

Second. From the destruction of the fibrin, and red corpuscles, consequent upon the action of the malarial poison, the tendency of inflammation excited in systems under the influence of the malarial poison, is to diffusion. The increase of fibrin in the blood and in the inflamed structures appears to be destined in the economy of Nature to limit and circumscribe the inflammatory action by the fibrous matter thrown out within and around the inflamed part. The colored blood-corpuscles which crowd the inflamed parts appear to contribute by the chemical changes which they excite, and especially by the increased oxidization of the albuminoid elements, to the formation of fibrin, which in this view may be considered as one of the controlling and limiting elements of inflammation. Whatever, therefore, tends to diminish the red corpuscles and fibrin, tends to interfere with the natural processes employed by Nature in the limitation of inflammation, and directly promotes the diffusion of the inflammation over a greater extent of tissue, and in a corresponding degree renders it more severe and dangerous.

From these facts and considerations, we conclude that, whilst the malarial poison cannot be said directly to produce hospital gangrene, still it is capable of inducing such changes in the blood and in the nutritive and excretory processes as alter the usual course of inflammations.

In scorbutic patients, all injuries tend to form ulcers of an unhealthy character, and even so simple an operation as vaccination may be followed by the most extensive sloughing and even gangrene of a fatal nature.

In dejected scorbutic prisoners confined in filthy military prisons, I have seen the smallest accidental injuries and abrasions of the surface, as from splinters, or bites of insects, followed by

such extensive gangrene as to necessitate amputation. The scorbutic condition induced by salt meat and farinaceous food without fresh vegetables, frequently modifies the course of diseases, poisons wounds however slight, and lies at the foundation of those obstinate and exhausting diarrhoeas and dysentery, which prove so fatal to beleagured armies, to soldiers in military prisons, and to seamen upon long voyages.

Scurvy and hospital gangrene frequently exist in the same individual. In such cases, vegetable diet, with vegetable acids, would remove the scorbutic condition without curing the hospital gangrene.

It has been well established by my own observations, as well as those of Blane, Trotter and others, that the scorbutic condition of the system, especially in crowded camps, ships, hospitals and beleagured cities, is most favorable to the origin and spread of foul ulcers and hospital gangrene. In many cases, it is difficult to decide at first whether the ulcer be a simple result of the scorbutic state, or of the action of the poison of hospital gangrene; for there is great similarity in the appearance of scorbutic ulcers and genuine hospital gangrene. So commonly have these two diseases been combined, that the description of scorbutic ulcers by many authorities, evidently, includes also many of the prominent characteristics of hospital gangrene, as will be seen by a reference to the description of Lind, Trotter, Blane and others.

2d. The air of crowded hospitals, tents, and ships, loaded with animal exhalations.

The causes examined in the preceding section, should more correctly be termed, conditions favorable to the development of hospital gangrene. The most essential condition and efficient cause of hospital gangrene, is found in the exhalations which contaminate the atmosphere of the crowded, badly ventilated and filthy tent, prison, hospital or ship.

In the present condition of the Confederate troops, exposed as they have been to unparalleled labors and fatigue, with short and unvaried rations, the crowding of the wounded into close box cars, and thence oftentimes into hastily extemporised, badly ventilated and filthy houses and hotels for hospitals, is almost uniformly attended by the appearance of hospital gangrene. The

severity of the disease will be greatly increased in a damp, warm, low, malarious atmosphere. In a stagnant moist atmosphere, it is almost impossible to secure in the wards of large hospitals, even when the windows are kept always open, such a constant change of air, as will prevent the deleterious action of the exhalations from the wounded surfaces, and from the lungs and skin and excretions of the patients. As far as my observations extend, I am led to the belief that the exhalations act not only upon the wounded surface, but also through the lungs and skin ; and that by the continuous absorption of these deleterious matters through these channels, the nervous system may be so depressed and the constitution of the blood so altered, that hospital gangrene may arise independently of local action. This question however admits of much investigation and discussion.

It is now at least believed by a large portion of the profession, if not established, beyond all doubt, that the animal exhalations of crowded tents and hospitals, are capable of developing in the healthy nurses, two distinct species of fever, characterized by many of the symptoms of hospital gangrene. It is without doubt true, that the heavy mortality from pneumonia and typhoid fever, in the Confederate hospitals, has been due in great measure to the depressing effects of animal exhalations ; and it is probable that many cases of pneumonia have been converted by these agents, into cases of hospital gangrene of the lungs.

3d. The contact of the gangrenous matter, with diseased and wounded surfaces, as in using unclean sponges, bandages, wash, bowls and surgical instruments.

No doubt appears to exist in the minds of many surgeons, that hospital gangrene may be readily communicated by actual contact of the matter, from one wound to another, and that the matter may be inoculated into the healthy subject, just as in the case of the matter of small-pox, and produce a poisoned wound exactly similar to the one from which the matter was taken.

I have demonstrated conclusively by experiments upon animals, and by careful observation of gangrene in healthy wounds and in nurses attending gangrenous patients and upon the origin of the disease in washerwomen, who did not enter the wards or come in contact with the patients, but who simply washed the clothing

and rags soiled with the discharges of gangrenous wounds, that the matter of this disease possesses contagious properties, and that it will reproduce itself when inoculated upon a healthy individual.

After careful observation and consideration, the following conclusions have been drawn :

First. Hospital gangrene is caused by the action of an irritant corrosive organic poison, generated during the decomposition of animal matter under certain conditions, and capable of exciting change and decomposition in living structures with which it is brought into contact, after the manner of a ferment.

Second. Hospital gangrene may at any time arise de novo, when sick and wounded soldiers are crowded together in badly ventilated houses, filthy hospitals, close box cars, or on ship board.

Third. Hospital gangrene will arise most readily under these circumstances, when the soldiers have been on scanty and poor food, and have been exposed to fatigue, loss of rest, the constant excitements of battle, and the unhealthy atmosphere of crowded filthy camps and beleaguered cities.

Fourth. When crowded together a large proportion of the wounds may become gangrenous, without any direct application of the matter, and before even the dressings have been removed.

Fifth. If cases of hospital gangrene be introduced amongst the sick and wounded of any hospital in which the disease is not prevailing, the rapidity with which it will spread will depend upon the hygienic condition of the hospital, and also upon the elevation of its situation, and the temperature and moisture of the climate.

Sixth. If the preceding propositions be true, it is evident that the crowding of human beings together, whether sick or well, in confined spaces, so deteriorates and poisons the atmosphere, that all wounded surfaces are liable to become infected. As the disease, sometimes arises amongst freshly wounded soldiers, without any introduction of the disease, from without, and also amongst isolated cases of wounds introduced into hospitals crowded simply with the sick ; the conclusion is inevitable that the disease arises as much from the action of air rendered foul by animal exhalations, and by changes in its chemical, physical and electrical constitution, upon wounded surfaces, as from any contagious effluvia arising from the gangrenous wounds.

III.—TREATMENT OF HOSPITAL GANGRENE.

Measures for the prevention of the disease.

The observations upon the relations of insufficient food, fatigue and the exhalations of crowded tents and hospitals to the origin and spread of hospital gangrene, indicate at once, without farther discussion, the best means for the prevention of this disease.

Abundant supplies of nutritious animal and vegetable food, free ventilation with the largest possible supply of fresh air to each patient, with scrupulous cleanliness of the wounds, as well as of the person's clothing, bedding and apartments of the wounded are the great prophylactic measures against hospital gangrene. When this disease appears in a filthy or crowded hospital, a heavy responsibility rests upon the medical officers. It would be far better after great battles to scatter the wounded under sheds, and even under trees, than to crowd them into close tents and hospitals, or to transport them to a distance in close box cars. Unfortunately it has been deemed necessary after several great battles, to transport large numbers of wounded soldiers in close, badly ventilated box cars, hundreds of miles from the scene of action. In many instances, the supply of water was limited, the wounded men shut up in these hot confined boxes suffered from thirst, and the unwashed and filthy wounds emitted a foul stench which contaminated the entire atmosphere. The severest epidemics of hospital gangrene have appeared in wounded subjected to these most favorable conditions for the origin and spread of the disease.

In general hospitals, each seriously wounded man, should be allowed if possible, two thousand cubic feet of air; the severest cases should be distributed uniformly amongst the slightest cases; and each ward should be thoroughly cleansed, whitewashed and fumigated, at least every two months. The free use of Labarraques' solution of hypo-chloride of soda, as a wash to all serious wounds, will not only add to the comfort of the patients, and promote the healing of the wounds, but it will also tend to prevent the origin and spread of hospital gangrene. When Labarraques' solution cannot be obtained, a weak solution of nitro-

muriatic acid, in the proportion of one fluid ounce of the acid to a gallon of water, will make a useful disinfecting and slightly stimulating wash for wounded surfaces. This solution should be prepared fresh each morning, and the wounds should be carefully washed with it, at least morning and evening.

It is well established that fumigations with chlorine, are more efficacious in purifying the wards of hospitals than any other means. In the present state of the Confederacy, however, it is almost impossible to command the necessary supplies of the mineral acids, and the best indigenous substitute which has fallen under my observation is the tar fumigation. In the tar smoke, carbon in a highly divided state, together with various disinfecting emperumatic matters, are the active agents which purify the infected atmosphere of the crowded hospital. This smoke so far from irritating the lungs, appears to act beneficially upon pulmonary complaints.*

CONSTITUTIONAL TREATMENT OF HOSPITAL GANGRENE.

Inflammation in the healthy system is a reparative process of Nature, and should be studied and treated as a modification of the natural processes concerned in the preservation of the body; or, in the language of John Hunter: "Inflammation in itself is not to be considered as a disease, but as a salutary operation, consequent either to some violence or some disease;" it is "only a disturbed state of parts which require a new but salutary mode of action to restore them to that state wherein a natural mode of action alone is necessary."

When a foreign body is thrust into the living tissues, the delicate capillaries are broken up, the mutual relations of the forces are disturbed, the nerves are injured so as no longer to be capable of exerting their normal influence. If the foreign body be im-

NOTE.—* Just after the close of the recent war, I commenced the use of carbolic acid as a stimulative and disinfecting application to wounds and unhealthy ulcers, and the results have been most satisfactory.

A solution of one ounce of the crystallized acid to the gallon of water, would make a most useful and cleansing wash for all unhealthy wounds and ulcers, combined with simple cerate, in the proportion of from mx xv to one drachm to the ounce of simple serate, it acts most beneficially upon wounded surfaces, and in hot weather entirely keeps away the flies and insects.

mediately withdrawn, and if the animal wounded be in a state of perfect health, that is, with a proper constitution of the blood and structures, and a proper circulation of the forces, the blood, and especially the coagulable lymph, may close up the wound, and, with the exception of pain, and of a temporary congestion of the surrounding parts, from the obstruction of the circulation in the injured capillaries, thus forcing more blood around the injured part, as well as from the disturbance of the nervous force and of the process of nutrition in the surrounding capillaries, no other phenomena are manifested. The effused fibrous matter, endowed itself with life and surrounded by living tissue, and subjected to the influences of living tissue, passes through various changes which resemble the changes in normal nutrition, secretion and development, and which result in development of cells and fibres, and in the repair of the injured part.

If, on the other hand, the structures are too much injured to be repaired in this manner, the same disturbances and the same phenomena are manifest; but, being increased in intensity, the changes in the nutrition of the injured part progresses to correspondingly greater effects. The same effusion, and the same reparative processes are active in the one case as in the other, but in the latter, the dead tissue acts as a foreign body, and must be removed, and a process instituted by which its place may be supplied by other living matter. As the matter effused and the injured tissue possess a definite chemical constitution, and are related by definite affinities to the surrounding forms of matter, and as they are subject to the action of fixed forces exciting and controlling the nutrition and circulation of the surrounding parts, the products will, to a great extent, be uniform in the healthy organism.

When, on the other hand, a mechanical injury is inflicted upon a living animal whose forces are depressed, and the nutritive elements of which are deficient in quantity, the process of repair will be correspondingly retarded, and the products will be correspondingly altered from those formed in the healthy organism. If the system be under the influence of some disturbing agent, as a poison, at the time of the reception of the injury, the characters of the inflammatory process will manifestly depend upon the affini-

ties of the extraneous substance or poison for the elements of nutrition, and upon its power to disturb the nutrition, secretion, excretion, and the nervous and muscular forces. In the case of a poison acting in the blood, its local and inflammatory effects will be chiefly manifested in that organ for which it has the greatest affinity, or in the nutritive processes in which it produced the greatest disturbance; and as the most essential changes of the blood take place in the capillaries, it is in these parts that we must look for the chief disturbances. In this case the effects of inflammation may be widely extended, not only by the reflexion of the local disturbances to other parts, through the nervous system, but also by the entrance into the circulation of certain products of inflammation which will be capable of inducing changes in the mass of the blood, and in the nutrition and secretion of various organs.

In this last form of inflammation, when, in addition to the local injury, we have a poisoned condition of the blood, and of the structures involved in the local inflammation, the manifest indications from the principles just laid down are :

First.—To remove the patient from all causes which tend to depress the system, and especially from those causes which are known to have been directly and specially active.

Second.—To eliminate the deleterious agent.

Third.—To restore the system to such a condition that healthy nutrition, reparation and inflammation may take place.

Fourth.—To induce such changes in the injured parts themselves, as will lead to a complete separation between the diseased and dead structures.

Fifth.—To destroy all poisonous matter in the diseased parts.

Sixth.—After the removal of the dead parts, and after the destruction of all contagious elements capable of disseminating the disease to the surrounding tissues, to stimulate the capillaries and absorbents around the local injury to healthy active inflammatory actions, as will result in the development of healthy granulations. The three last indications will be considered under the head of the *local treatment*.

In the treatment of hospital gangrene the first essential measure, without which the most enlightened system of treatment is

comparatively valueless and at best tardy, is to remove the patient from the crowded wards, and to secure for him in an isolated room or tent, the largest possible supply of fresh air.

We have seen that the constitutional symptoms in most cases of hospital gangrene, hold a prominent place. The dejected spirits, the depressed state of the nervous system, the small accelerated pulse, the feeble, sluggish capillary circulation, and the depressed state of the temperature in the extremities, all point to the supporting, tonic and stimulant plan of treatment as the only rational system. The therapeutical indications are to furnish the elements of healthy blood, and of active nutrition, secretion and repair—to excite and support vital power, and to allay nervous irritability. These intentions are best fulfilled by resorting to combinations of tonics and anodynes, after the morbid secretions of the bowels have been evacuated by gentle purgatives or enema. In many cases emetics may be used with benefit; and it will almost always be found best to evacuate the constipated bowels by a purgative, and to keep them gently open by salines. The subsequent tonic and supporting plan of treatment will prove far more certain and beneficial in its action after the bowels have been cleared of morbid secretions.

Blood-letting should be avoided as tending to a still farther depression of the enfeebled forces, and also as inflicting a wound which may become gangrenous. For similar reasons blisters should as a general rule be avoided.

Quinine and the tincture of the sesqui-chloride of iron, deservedly hold a high place in the estimation of Confederate surgeons in the treatment of hospital gangrene. In cases of ordinary severity three grains of quinine and fifteen drops of the muriated tincture of iron, administered three or four times during the twenty-four hours, will be found to be sufficient, in conjunction with the other measures, to induce a marked and rapid improvement in those patients who are properly isolated and ventilated. When the ravages of the disease are extensive, and the danger of hemorrhage great, the amount of the tincture of the sesquichloride of iron may, with benefit, be increased to twenty drops every two or three hours. I have derived benefit from the following formula: R sulphate of quinia 3ij, chlorate of potassa 3ij, tinc-

ture sesquichloride of iron fʒij, hydrochloric acid fʒij, distilled water fʒij; mix the hydrochloric acid and distilled water, and dissolve in this acid solution the quinine and chlorate of potassa, and then mingle with the tincture of the sesquichloride of iron. Dose from thirty to sixty drops in a wineglassful of water (sucked through a quill to avoid injury to the teeth) every three, four, or six hours.

As far as my experience extends *quinine*, in *large doses*, exerts no beneficial effects upon the progress of the constitutional and local symptoms ; the best results are accomplished with moderate doses.

Huxham's tincture of bark (*tinctura cinchonæ composita*) administered in full doses, varying from one fluid drachm to half a fluid ounce, every three or four hours, fulfils in this disease important indications as a stimulant, tonic, diuretic, and elegant stomachic cordial. This should be administered at the intervals between the doses of the chloride of iron.

The sesquichloride of iron may, with advantage to the patient, be administered in combination with chlorate of potassa, in the proportion of from ten to twenty drops of the former, and ten to twenty grains of the latter, dissolved in two or three ounces of water. This dose may be repeated every two, three, or four hours. Whilst we are unable to explain the exact manner in which chlorate of potassa acts upon the system, still it is well established that it proves highly beneficial in those complaints in which a depressed state of the solids and fluids shows itself by malignant typhoid symptoms, and a disposition to phagedenic ulceration and gangrene. The combination of this salt with sesquichloride of iron is especially valuable from the liberation of chlorine and hypochlorous acid.

Hydrochloric and nitric acids, singly or combined, exert beneficial effects in some cases. Whenever they are indicated the sesquichloride of iron, or the combination of this salt with the chlorate of potassa, will answer an equal, if not better purpose, except when there is marked torpidity of the liver. In such cases the nitro-muriatic acid should be employed internally, and in the form of the bath.

The arsenical solution (Fowler's solution arsenite of potassa) has been employed with benefit in some cases.

Oil of turpentine, camphor, musk, and warm aromatics and spices frequently prove beneficial, and may be administered in various forms of combination.

The stimulant and depurant effects of the oil of turpentine appear to be of some value in the treatment of hospital gangrene. To obtain decided effects upon the capillary circulation, in the debilitated state of the system in this disease, the oil of turpentine should be administered in full doses at short intervals of time. So slow is the system to respond to stimuli in hospital gangrene, that I have known this remedy to be given in teaspoonful doses, at regular and frequent intervals, without any marked effects upon the kidneys or bladder. It is, however, a question, whether these large doses, especially if they be continued for any great length of time, may not lay the foundation of disease of the kidneys and bladder. Opiates are indispensable in the treatment of almost any case of hospital gangrene, and should be administered, when necessary, freely, to allay irritability and to produce sleep, and to check excessive discharges from the bowels.

The *diet*, throughout the whole course of this disease, should be as highly nutritious as possible, and should consist chiefly of concentrated animal soups, soft boiled eggs, egg-nog, milk punch, etc., with a liberal supply of vegetables and ripe fruits, if they can possibly be obtained. Good brandy, whisky, wine, or porter, administered in moderate quantities, at short intervals, will prove highly beneficial in almost all cases.

LOCAL TREATMENT OF HOSPITAL GANGRENE.

Whether we regard the local affection as a poisoned wound, in which contagious, poisoned matters are continually generated, and from which the surrounding living tissues are contaminated, or look upon the destruction of the tissues as the result of deficient and perverted inflammatory action, the principles of the local treatment would, in either view, be much the same. If the first view be held, our efforts should be directed to the alteration, destruction, and complete removal of the dead and poisonous matter and tissues.

If the second view be accepted, the manifest duty of the physician would be to use such measures as will increase the vital power of the tissues and vessels, and enable them to form coagulable lymph, by which the disorganization may be circumscribed and arrested.

These indications are best fulfilled, by the liberal and thorough application of *concentrated fuming nitric acid*, to the gangrenous parts. In this application it is desirable that the nitric acid should not merely coagulate and alter completely the gangrenous matters, but should also come in contact with the sound parts, and by its action upon the fluids and surface of the exposed parts, stimulate the living structures into a new form of inflammatory action, which will cause the complete separation of all the dead parts, the arrest of the farther progress of the disease, by the more exalted condition of the sound parts, and by the effusion of healthy coagulable lymph, and the establishment of the process of repair. As the operation of dissecting away all the gangrenous masses and the subsequent application of nitric acid, is attended in many cases, with great suffering, it is advisable whenever practicable, to first put the patient well under the influence of chloroform and sulphuric ether. By performing this operation leisurely and thoroughly at first, much subsequent suffering is avoided. And from careful observation, I am persuaded that the disease was in many cases greatly protracted by the superficial manner in which the wounds were cleansed and the nitric acid applied.

¹ In most cases, especially when the patients have been properly isolated, one thorough application of nitric acid will be sufficient if followed by the necessary constitutional and local treatment. If however the patients be retained in the crowded wards or tents, the most energetic treatment will fail entirely of arresting the disease.

After the entire surface of the wound has been thoroughly mopped with nitric acid, the subsequent treatment will consist in :

The careful removal of all dead masses and particles of tissue; the thorough cleansing of the wound with water, and with solutions of chlorinated soda, nitro-muriatic acid, acetic and pyrolig-

neous acid, tar water, solutions of creosote, and Huxham's tincture of bark, at stated intervals during the day; covering the parts with flaxseed, meal, yeast, hop, or charcoal poultices, rendered stimulating with turpentine, spirits of camphor, tincture of iodine, camphorated tincture of opium, Huxham's tincture of bark, pyroligneous acid or creosote.

The prompt removal of all detached masses of tissue, and the thorough washing away of all morbid secretions, are most important means to prevent the recurrence of the disease, and to secure the establishment of healthy inflammatory action. Whenever a circumscribed portion of the wound looks unhealthy and gangrenous, the nitric acid should be applied directly to the diseased parts, care being taken that the *sound parts*, be not unnecessarily subjected to its action.

In many cases, before the wound assumes a healthy condition, instead of applying poultices, it is preferable to fill the cavity of the wound with lint or cotton, saturated with various stimulating fluids, as a weak tincture of iodine, oil of turpentine, tincture of camphor, tincture of Peruvian bark, or pyroligneous acid. When there is danger of haemorrhage, either from large vessels, or from the general surface of the wounds, lint saturated with the undiluted tincture sesqui-chloride of iron, or with a strong solution of the per-sulphate of iron should be applied. It may be laid down as rule, that ligation, or amputation, should not be resorted to in cases of haemorrhage in hospital gangrene, until these efficient styptics have been freely and fully applied to the bleeding surfaces.

Whilst the patient is retained in the infected atmosphere, or whilst the disease is progressing, amputation will, in most cases, prove worse than useless. Under such conditions hospital gangrene will invariably reappear in the stump, and the only effect of amputation will be to expose a larger diseased surface, and to bring the gangrene nearer the central organs. As a rule, no amputations, no matter what be the condition of the wounds, whether gangrenous or healthy, should be performed in the wards of a hospital in which gangrene is prevailing. Such practise is as reprehensible as the careless distribution of healthy and fresh wounds amongst the gangrenous wards.

When amputation is unavoidable, as in the case of the opening of large joints, or the destruction of important arteries and nerves, the patients, whether the wounds be gangrenous or not, if the disease be present in the hospital, should be isolated as far as possible, and every attention paid to proper ventilation, cleanliness and diet.

After the appearance of healthy granulation and of laudable pus, the stimulating, astringent, and caustic applications should be abandoned, or only occasionally used with caution, and the wound should be treated as any other simple granulating ulcer.

Various other applications have been recommended and employed by Confederate surgeons in the local treatment of hospital gangrene, as the actual cautery, sulphate of copper, acid nitrate of mercury, chloride of zinc, nitrate of silver, and persulphate of iron. These remedies, without doubt, exert beneficial effects, as I have myself frequently witnessed. The method, however, which has just been given, as far as my observation extends, is the most efficient.

II.—*Pathology and Treatment of Purpuræmia:* By DR. BENJ. H.
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SYNOMYS.—Hæmaturia, up-country yellow fever, cachæmia, malarial hæmorrhagic fever, bloody chills, that new disease, malignant congestive fever, yellow remittent fever, etc.

I do not deem it necessary to detail the symptoms of this disease; I merely wish to present a theory regarding its physiological character, and to give what I know to be a *successful* treatment. Let it suffice that I allude to the new and fatal form of disease which has been prevailing throughout Southern and Central Alabama, and elsewhere, I believe, since 1865, a commonly called hæmaturia, and for which I propose the name purpuræmia.

Theory.—I believe all the symptoms which are present in this disease, with its too frequent fatal ending, are due to systemic poisoning with *purpurine*, of Golding Bird, or haemaphæin and

uroërythrine, of Simon, or uroxanthin (subdivided into uroglan-cin and urohodin) of Haller, or the red uremic coloring matter of Lehman.

Hypothesis of the Morbific Operation.—One of the functions of the spleen, which seems to me to be as well established as most of the facts of physiology, is to aid in the retrograde metamorphosis of the red blood-corpuseles; to break them down, as it were; this renders the blood which passes from it through the splenic vein to the liver more homogeneous than it was when entering it through the short and capacious splenic artery. Kölliker has lately put forward the remarkable opinion "that the spleen is the seat of a process of destruction or dissolution of the blood-corpuseles." Todd & Bowman's Phys. Anat., page 643. In 1847 Kölliker advanced the theory "that blood-corpuseles became disintegrated in the spleen;" an opinion which was afterwards supported by Ecker and Bèclard. "From various facts which we have alluded to, we cannot but look at this fact as decided in the affirmative," etc. Ibid, page 813. "The blood-corpuseles of the splenic vein are reduced to half the quantity of those of the arterial or venous blood, and the more turgid the spleen the greater the reduction." Ibid, page 813. "From which it appears that the blood, after circulating through the spleen, has lost a large portion of its cells, the relative quantity of its albumen is greatly increased," etc. Draper's Physiology, page 212. "But, besides this safety-valve function, there can be little question that the spleen performs some other, which is related more closely to the nutritive operations, and which in some degree corresponds to that performed by the absorbent glandulæ. * * * * This view is confirmed by the remarkable fact, ascertained by recent experiments, that after the spleen has been extirpated, the lymphatic glands of the neighborhood increase in size, and cluster together as they enlarge, so as to form an organ which at least equals the original spleen in volume. * * * But this organ also appears to promote the disintegration of those red corpuseles which have become effete; and this so powerfully, that the blood of the splenic vein contains a far *less* proportion of red corpuseles, and a far *greater* proportion of albumen, than that of

any other vessel in the body." Carpenter's Elements of Physiology, pages 288 and 289.

Such is the present state of our knowledge of one of the functions of the spleen.

Now let us turn our attention for a while to the liver: "The liver is a great emunctory; it eliminates carbonaceous matters, some directly, etc. The question occurs to us, may the liver be a source of supply of blood-corpuscles, or may it contribute to the production of haematin in adult life? It has often struck us that the question might be answered in the affirmative, while observing cases in which the process of the formation of blood seemed greatly perverted, when no organic disease could be detected beyond some degree of enlargement of the liver." Todd & Bowman's Phys. Anat., pages 606 and 607. "Whatever part of the disintegration of old blood-cells takes place in the spleen, their final destination is, doubtless, accomplished in the liver, this being the immediate source from whence the bile itself is derived. Though these metamorphoses are, to a greater or less extent, occurring throughout the circulation, it is in these two great glands that an opportunity is afforded for the destruction to reach its completion, and the resulting product of waste to be removed.

* * * The liver also aids in the preparation or maturation of young blood-cells in an indirect way. There are certain of the mineral constituents of the disintegrated cells too valuable to be cast away. * * * As such a substance may be mentioned iron." Draper, page 210.

Now I might go on quoting authority after authority to sustain these views of the functions of these two great glands, the spleen and the liver, showing their mutual relation and dependence. It is believed by many educated and intelligent physicians that animal life is totally independent of the spleen. This is somewhat of an error; it will be seen from the above extracts that when the spleen is removed the lymphatic glands of the left hypochondrium enlarge so as to give a compensatory action, in obedience to a well recognized law of the animal economy. We have seen that the spleen breaks down the matured corpuscles, sets free their contents, and sends their haematin and albumen through the splenic vein and vena porta to the liver; the liver finishes

this action ; those corpuscles which have successfully resisted the spleen here are disorganized, the iron or haematin of the splenic blood is taken up and added to the young white corpuscles coming up from the ductus lymphaticus, maturing them and giving them color ; the effete carbonaceous matters are rearranged and formed into new compounds to be reabsorbed, as bile, from the enteric canal, or discharged from the body as faeces. The regular discharge of these functions is absolutely indispensable to the health of the economy. Young corpuscles are continually being formed in the lymphatic duct and carried to the liver to be perfected by its action ; to do this the liver must take certain elements from the systemic blood, principally derived from the splenic vein, thus relieving it of substances which would soon be hurtful, by forming metamorphic compounds of an injurious character, and supplying to these bodies articles necessary to their perfect development. Here we have two elements of disease, both of a negative character ; in the one, substances which should be removed from the body are allowed to accumulate ; and in the other, substances which are necessary to the perfect development of these vital organs, the blood-cells, are not added to them. It is highly probable that the feeble development of corpuscles thus formed favor their more speedy dissolution. Now, if on the other hand, you possess a "turgid spleen," more active in its function of disintegration, or a spleen rendered more active from any cause, there will be a more rapid dissolution of corpuscles and a greater accumulation, as a consequence, of effete matters, destined for the action of the liver. Again, suppose you have a torpid spleen, not performing its disintegrating duty, blood-corpuscles are still being formed from the lymph, and are still dying and disintegrating in the general circulation ; and, I would suppose, as I before said, that corpuscles formed during such a depraved state of the nutritive functions of the vital organs, would be of such feeble vitality that their disposition to decay would be greater and their death more rapid.

* Thus we have an accumulation of metamorphic bodies in the blood current of feeble vitality, and which either become hurtful themselves, or form new compounds which are positively so. So we have all the conditions of disease, and thus, in my opinion,

constituting the disease which I have called *purpuræmia*. Let us now proceed with the metamorphosis of the blood-corpuscles; the next question for consideration is this: What changes do the hæmatin and globulin undergo? It has already been shown that both these substances must undergo an entire change during the period of the development of the blood-corpuscles, that terminates in their consumption or solution. The plasma contains a peculiar coloring matter hæmaphæin, to which it owes its yellowish color, and which cannot accumulate in it beyond a certain amount, because it is continuously removed by the kidneys; it is, in fact, this constituent that gives the yellow or yellowish-brown tint to the urine. It can hardly be doubted that hæmaphæin is a product of the metamorphosis of the hæmatin, * * * * we can obtain from the serum only slight traces of hæmaphæin, but the clot yields a considerable amount of coloring matter, which must therefore be contained in blood-corpuscles. The hæmaphæin is found from the hæmatin during the development of the blood-corpuscles, etc. I shall be able to demonstrate * * * on the other hand, in blood which is retained in the body without being submitted to the due action of oxygen, in which the perfect metamorphosis is checked, the corpuscles are not dissolved, as in melæna and morbus maculosus, there is a great excess of hæmaphæin. The coloring matter may also accumulate when organs that take an active part in the metamorphosis of the blood are affected." Simon's Chemistry, Sydenham Edition, 1845, vol. 1, pp., 159 & 160. "Hæmaphæin. It is this constituent that gives to healthy urine its amber or brownish-yellow color. The variations in the tints of the urine are dependent upon the quantity of its coloring matter." Ibid, vol. 1, p. 181, & vol. 2, p. 119.

Uroërythrine. In certain pathological conditions (especially in intermittent fevers) the urine possesses an intensely red color, and deposits a dark-red precipitate. Proust, who was the first that carefully examined this class of sediments, discovered in them a peculiar acid to which he gave the name of rosacie acid. He subsequently found that this acid was merely a compound of uric acid with a red coloring matter. This red coloring matter has been observed by Landerer in the sweat from the axillary

region of a girl with fevers." *Ibid.*, vol. 1, p. 45. It would consume too much time and space for me to go more fully into details and quote authorities further. I will give the views in substance of Simon, Bird, Lehman, Todd, Bowman, Draper, Carpenter, and some others, upon subjects touching the one under consideration. I refer all who desire to investigate the subject more fully to the following works: viz., Lehman's *Physiol. Chem.*, vol. 1, p. 284, & vol. 2, p. 139—Todd and *Bowman's Physiol. Anat.*, pp. 507, 508, 511, & 512, Article Functions of the Sympathetic Nerve. *Todd on Urinary Diseases*, pp., 21 to 70—Article *Hæmaturia*. *Bird on Urinary Deposits*. Article *Purpurine*, pp. 167 to 170, and pp. 340 to 364—Blood Deparation. *Draper's Physiol.*, p. 221. *Dickson's Elements of Medicine*, p. 377. *Amer. Jour. Med. Science*, July, 1868, p. 363.

The urine in health is observed to vary in tint from a pale straw color to deep brown or red; in some diseases this color is very much deepened, and becomes a deep pink or dark red. To this pigment Golding Bird gave the name *purpurine*, and considers it identical with what Simon afterwards called *uroërythrine* (which he considered identical with *haemaphæin*), and Heller more lately *Wrhodir*. See *Bird on Urine*, Dep. p. 115. *Purpurine* is composed as follows:

Carbon	58.43
Hydrogen.....	5.16
Nitrogen.....	8.83
Oxygen.....	27.58

Prof. Scherer, of Wurtzburg, supposed this substance to be the direct result of the destructive assimilation of the blood-corpuscles. "My experience, indeed, leads me to express a firm belief that an excess of purpurine is almost Pathognomonic of disease in the organs in which portal blood circulates, and consequently must be essentially connected with the non-elimination of the carbonized elements existing in that fluid." *Bird on Urinary Deposits*, page 169.

"The urine must for the future be regarded as a vehicle for the excretion of carbon from the blood by the kidneys, and these glands thus appear, in all probability, to play no mean part in compensating for a deficient function in those organs, whose

special duty it is to secrete carbon, as the liver and lungs." Ibid, page 116.

The direct cause of the disease, as it prevails amongst us, I believe to be malaria. There are all the evidences of defective innervation, so I believe the poison acts primarily through the nervous system. I cannot say positively whether the cerebro-spinal or sympathetic system of nerves is first affected—they are so intimately connected that what affects one affects the other also. I however believe, from the symptoms, that the disease affects the sympathetic more, and that this system of nerves is more seriously and extensively involved; for it is this system that supplies those organs which seem to suffer most, as the liver, stomach, spleen and intestines; moreover the arterioles seem dependent on the stimulus derived from these nerves for their healthful action. As these nerves entwine about the arterioles of the body everywhere as the vine does the tree, I believe it to be through the medium of them that the morbid action under consideration is produced. The malarial poison being received into the body exerts a depressing influence on the nerve centers, as water on a burning fire, and impedes the generation of nerve force, so as to prevent the customary supply of stimulus to the capillaries of the liver, spleen and other vital organs; and the result is congestion or accumulations of blood in the sluggish and dilated, but non-contractile capillaries; congestion, according to degree, impedes or stops a discharge of function of secretory organs. In most, if not all the cases, of purpuraemia, the system has been suffering from the depressing influences of malaria for many months; many are old victims of intermittent fever; all are sufferers from habitually torpid emunctories. Through the deranged sympathetic system the spleen and liver slowly and imperfectly discharge their functions; the débris of the disintegrated blood-corpuscles are not removed as rapidly as they should be, therefore they accumulate and become heaped up, as it were, in the blood current, and become largely in excess; new degenerated compounds form as the result of this new and unnatural juxtaposition of bodies seeking elimination. And thus, in this highly albuminous blood, is formed *purpurine*, and the sufferer is now seized with all the symptoms of purpuraemia, or so-called hæmaturia. The kidney,

the great lever of the body, attempts to carry off this excess of albumen and accumulated purpurine, in order to free the system of these effete and poisonous compounds, this irritates the organ by taxing it with too great labor, and crowds it more than it can bear upon the received physiological maxim, "Ubi irritas; ibi fluxus;" a rush of blood takes place, and the overburdened, turgid and congested capillaries of the Malpighian tufts give way under the eccentric pressure of congestion, and haemorrhage is the result. The kidney is suffering a high grade of irritation from the unusual substances being drained through it; the haemorrhage is an effect and result of the consequent congestion "and nothing more." This effect often results from overdoses of turpentine, cantharides, or any other irritating diuretic. All the blood seems colored with the purpurine, though not of as deep a brown or red as it becomes upon exposure to atmospheric influence. The serum of any blister that you may draw is of a smoke-brown or mahogany hue, just as the urinous discharge is; I believe the cholemia or yellowness of the skin is due to the presence in the blood of this purpurine of Golding Bird, or hæmaphæin of J. Franz Simon, and to some biliphæin also. As might be expected the vitality, so to speak, of the blood is much lowered, the coherence or affinity of its constituents is much feebler, and there is a great disposition to extravasations or haemorrhagic fluxes. This changed blood sometimes transudes through the cuticular pores or produces blotches beneath the cuticle, or haemorrhage takes place into the stomach, bowels, or from the nose. This is nothing more than occurs in all diseases of a septic character.

To sum up: Purpuræmia then is due to malarial poison acting upon the nervous system primarily—the sympathetic mainly—quenching the supply of nervous stimulus to the systemic emunctories, and attended with a torpid spleen and liver; the effete matters which should have been depurated by these organs are allowed to remain in the blood, poisoning it by their presence; the result is yellow skin, red urine, haemorrhagic fluxes, fever and death, or purpuræmia. If it be asked why, if this be the true explanation of the nature of this disease, we have not had it prevailing before, as we have certainly had abundant torpid spleens and livers heretofore, following malarial infection, without it? I

may reply that, to a certain extent, it is a new disease, and has a peculiar and specific *constitution* or state of being. Explain to me why we have quinædron, tertian and quartan intermittents, congestive chill, remittent fever, malarial dysentery, neuralgia, etc., as the effects of malaria; then I may explain why we now have malarial purpuraemia. I do not, however, believe the disease to be entirely new; we find a disease like it mentioned by older writers. In Dictson's Elements, page 315, we find the following: "Willis mentions that a kind of endemic haematuria prevails in the Isle of France, without appearing to prejudice the health of the children, among whom it chiefly occurs." Todd on Urinary Diseases, page 87, makes the following statement upon the same subject: "It is endemic in the Isle of France, and so common that but few of the male population escape." Now it does not seem probable that people could habitually pass blood from their kidneys, or any where along the urinary tract, without suffering some inconvenience or impairment of health! It is much more reasonable to think that their urine was colored with purpurine, and that their kidneys were performing a vicarious function for their sluggish livers, livers and spleens. Again, may it not be that the disease occurring here of late, is the same as the one prevailing there so long anteriorly? It may be that the malaria of our atmosphere more nearly approaches in intensity that of the tropics, owing to our neglected farms and an almost universal neglect of hygienic and sanitary precautions; and hence the prevalence of, to us, a new and fatal malarial distemper.

Names.—I object to naming this disease *haematuria*, because this term already has a well-defined significance in medical nosology; moreover it is a remote effect of this disease and not always present. To call it any variety of *yellow fever* is improper, as this phrase has a well-defined significance also, and I do not believe that the affection under consideration has any pathological resemblance to yellow fever. *Cachexia* is vague and indefinite, and exists in many other affections. *Malarial haemorrhagic fever* is too lengthy and craneous; I do not believe it to be essentially a fever, the febrile action being a symptom as it is in purpura or uremia, and in many cases not existing at all; I have known attacks of this disease so tight that the sufferer did not take his

bed, merely looked yellow and voided red urine. Neither will *malignant congestive chills* answer the name for a name; all congestive fevers are malignant, but they are not the same as purpuræmia.

TREATMENT.—Whether my hypothesis of the nature of this disease be correct or not, I can certainly recommend the following treatment from its success. As it prevails around here (Selma, Ala.), it is not a fatal disease; in fact one of our physicians, rather boasts of his success in treating it with the hypo-sulphites, though giving it on the erroneous theory of its anti-zymotic action. The hyposulphites are saline cathartics, alkaline diuretics and somewhat diaphoretic; hence their efficacy here. When there is an inflammatory condition of a high grade; attended by high fever, restlessness, pain in the back, quick and bounding pulse, and the frequent passing of quantities of *bloody* urine, try to relieve the congested and overburdened kidney; the irritation and engorgement of this organ is intense, and the delicate vessels of the Malpighian bodies are bleeding freely. To do this, excite the action of the skin by diaphoretics and the bowels by purgatives; use counterirritants over the region of the kidneys; the pulv. Jaquin comp. answers well as a watery purgative; if possible use the hot air bath to promote diaphoresis; blister the lumbar region; let the patient drink warm lemonade or flaxseed tea to dilute the peritoneum. In most of the cases, however, you can resort at once to the following plan of treatment, and I believe where medicine can cure at all, success will invariably follow. Give half drachm acetate of potass, every hour or two hours in a *teacupful* of warm flaxseed tea, bruised water-melon seed tea or Binhay tea. The stomach will take that quantity of fluid; if not, give it in a single glassful of the same teas; let the patient drink *ad libitum* of plain water *ad libitum*; it is important to have as much fluid taken as the stomach will bear without vomiting, as diuresis is better when given by the teacup or tumblerful than when given in smaller quantities of water, as by the teaspoonful; moreover, the water reduces the irritation of the kidney by diluting the virid substances passing through it. I have also used in a case that recovered, the one-twentieth grain sanguine, every two or

three hours, directed to be discontinued as soon as muscular contractions were produced by it, and then given at longer intervals so as to sustain its influence. After the symptoms are somewhat relieved, the following formulæ may be used with benefit :

Rx	Potass. Chlorat., Sodaæ Hyposulphit.....aa	3 ij,
	Alcohol.....	f $\frac{1}{2}$ ss,
	Water.....	f $\frac{1}{2}$ vss,
		M. S. Tablespoonful every four hours.

Or this :

Rx	Tr. Ferri Chlorid.....	f 3 ij
	Potass. Chlorat.	3 ij
	Acid. Hydrochlor. Dil.....	f 3 ij
	Ext. Taraxici.....	$\frac{1}{2}$ ss
	Aq. Distillat.....	f $\frac{1}{2}$ ij
	Syrapi.....	f $\frac{1}{2}$ iiij
		M. S. Teaspoonful every four hours.

The gist of the whole plan is this: Assist the kidney to free the blood from the morbid poison ; if it succeed in this the patient is relieved. Eschew calomel, quinine and opium as agents that seem to act hurtfully in this disease.

When convalescence is established, build up the system with tr. ferri chlorid., or the dried sulphate—which I prefer—chlorate of potash, and some vegetable bitter ; and watch that the kidneys are kept on duty, ever bearing in mind the following language of Golding Bird, on page 355 of his admirable work :

“ We have next to notice those remedies among the reputed diuretics which exert the influence I have alluded to, and which, according to my own observation, act as *renal depurants* by increasing the metamorphosis of tissue, and act as depurating agents. This class includes the alkalies, their carbonates and their salts, with acids, such as in the animal economy are capable of being converted into carbonic acid, including liq. potass., the acetates, tartrates and citrates of soda and potash.

III.—*On Irritation of the Urinary Organs Produced by Santonica and Santonine:* By E. D. McDANIEL, A. M., M. D., Camden, Alabama.

THE object of this communication is to call attention to an action

of santonica and santonine, which does not seem to be generally known. It is an action on the urinary organs, and is, according to my observation, the most regular, uniform and certain effect, produced by santonica, or its derivative, santonine. There is no difference at all, so far as this action is concerned, between the two remedies, due allowance being made for their difference of strength and concentration. As a general rule, in two or three hours after a first dose of either of them has been given to a child free from fever; and, almost without exception, after a few additional doses have been given at intervals of four, five, or six hours, the urine, if not increased in quantity—which it generally is—is voided with greater frequency and is changed in color. It puts off its ordinary amber color and takes on a deep saffron; it resembles in hue a saturated solution of pure yellow prussiate of potash; it imparts this color to clean white cotton cloths dipped in it, and these cloths retain the color after they become dry. The color is the same as that acquired by santonine after prolonged exposure to sunlight.

During the earlier years of my practice I used santonica almost exclusively; I then supposed that the coloring matter of that substance, like those of rhubarb and beets, passed into the urine, and gave this its tint. In more recent years I have used santonine almost exclusively, and find that this preparation, from which the coloring matter has been separated, or in which it has been neutralized, impresses the urine equally and similarly with santonica. Moreover, santonine, whether fresh, pearly and white, or rendered yellow by exposure to sunlight, does not dissolve in urine. I am, unable, therefore, to explain how the change in the color of the secretion is effected.

But let us go on with the facts: After continuing the exhibition of either santonica or santonine, sometimes no longer than above indicated—sometimes longer—in doses of from two to four grains of santonine, or an equivalent of santonica, the urine becomes turbid, *turbid even when first voided*, and symptoms of vesical and nephritic irritation become quite clear. There is frequent and painful desire to void urine, and the discharges are scanty. There is regular dysury. Much the same state of things exist as happens in irritation from cantharides, or from spirits of turpentine, and haematuria often ensues. i

I have uniformly witnessed the above described series of effects, or a tendency thereto, whenever I have administered the reliable anthelmintic now under consideration; and my rule has been to discontinue the remedy so soon as marked irritation begins to be heralded. The trouble, thereupon, kindly, spontaneously, and gradually subsides, the vesical and nephritic irritation passes away, and the urine puts off its turbidness and yellowness.

My own observation of the facts above stated has been maturing for a period of more than ten years, and is, also, gratifyingly verified by that of my friend, Dr. J. Paul Jones, of Camden, Ala. He has kindly reported to me many cases that have occurred in his practice. One of these, which advanced to hematuria, he reported to the Medical Society, of Wilcox county, when I read to that body, in 1865, the substance of what is advanced in the present paper.

The following inferences are respectfully submitted:

1st. Santonine is a stimulating diuretic, and, in this respect, is allied, in therapeutic action, to cantharides and spirits turpentine.

2d. Santonine is an irritant to the urinary organs, and is, in this respect, intermediate, as a toxic agent, between turpentine and cantharides, being far more energetic than the former, and perhaps, less so than the latter.

3d. Santonine is anthelmintic and febrifuge, and, in these respects, is allied, therapeutically, to turpentine, spigelia, and chloride of sodium.

4th. Santonine is contra-indicated in active hæmaturia, or a tendency thereto, and in active inflammation of the urinary organs, or a tendency thereto, and indicated in reverse conditions.

IV.—*Intermittent Icteric Fever*: By F. S. SHARPE, M. D., Natchez, Miss.

DURING the years 1866, '67 and '68, a disease prevailed throughout the Mississippi Valley and other portions of the South, that

was "something new" to many practitioners, and consequently attended with great mortality.

The general group of symptoms of this disease, in my practice, has been invariably the same. The paroxysms have begun with chilliness; amounting in severe attacks to rigors, followed by a well marked hot stage which passes off without perspiration. The head suffers but little; the stomach is *invariably* sick, (accompanying this symptom is vomiting and restlessness); the bowels constipated; the urine, after the second paroxysm, and sometimes before, is of a deep yellow color, and the skin jaundiced, with great loss of vitality.

Early in the disease the patient urinates but seldom; not oftener than twice in twenty-four hours, and then very copiously. In a deep vessel this fluid seems black, but it may be proved to derive that appearance merely from concentration of the yellowness; by pouring a little of it in a shallow white dish, or by dilating it with water, when the brilliant yellow tint will become manifest.

This fever oftener attacks males than females, and is one of Autumn or early Winter. It is neither contagious or infectious; nor will one attack give an immunity. It is peculiar to malarial regions, and persons who have suffered from repeated attacks of intermittent or remittent fevers during the spring and summer months are more liable to an attack than others who have escaped these fevers.

An analysis of the urine will give the diagnostic difference between this and the only disease it may be mistaken for, viz., intermittent or paroxysmal haematuria.

The prognosis is difficult and must continue so, until the pathology and treatment are well understood. If the urine is passed regularly or at shortened intervals, and gradual changes in color occur, the prognosis will be favorable; if, however, it is suddenly suppressed or suddenly returns to a normal condition, the patient may die of uremic poison, effecting the lungs or brain, in a few hours.

Occasionally, the access "annihilates the powers of resistance," and the patient dies before therapeutics has time to benefit him.

For the past three years I have adopted the following satisfactory plan of treatment. Upon approaching the bed-side, the *nausea*, *vomiting*, and *restlessness* of the patient will first demand attention; they are more certainly arrested by small portions (one grain) of dry calomel placed on the tongue, and followed by teaspoonful quantities of ice-water than any other remedy. Continue the calomel (to reach our second indication) every half hour until ten or fifteen grains have been retained. If after six hours the liver is not acted on by the mercury thus administered, blister the surface over that organ. This is not easily done in this disease, but it is very necessary. If indicated, repeat the calomel.

When the fever commences to subside give quinine in the usual doses, not in large quantities, for it seriously complicates the disease.

As soon as the stomach will retain it, give potass. iodid. in large doses three times daily as a mercurial solvent and a diuretic.

To relieve pain use external applications. Opium and its preparations, and remedies of that class, are hurtful.

Close watchfulness over the condition of the brain and lungs is very necessary, in order to detect the earliest symptom of uræmia.

To effect a cure in this fever, it is necessary to cause the liver to perform its function, to relieve the kidneys of their double duty, and to assist them to perform perfectly their depuratory process.

REMARKS.—I know nothing of the pathological condition of the organs in this disease (as the above treatment has invariably been successful) but I consider it a distinct variety of fever differing so widely from any one of the malarial fevers of the text books that it requires a name. I suggest that of intermittent icteroid fever, as one sufficiently comprehensive and as one peculiarly descriptive.*

* In connection with above article, attention is called to an Article in this Number, by Dr. B. H. Riggs, Selma, Alabama.—Eds.

ART. V.—*Report of Two Cases of Successful Lithotomy, with Remarks upon the special indication for this Operation:* By SAMSON EAGON, M. D., of Jefferson City, Texas.

1.—J. L., a native, aged twenty years, presented himself for examination, February 5th, 1868, with the following previous history: Had suffered from early infancy from renal, vesical, and urethral disorders of a paroxysmal character, recurring at the interval of several months during the first several years of suffering, and lasting one or several days, but for the last six or eight years he has enjoyed less exemption from suffering, the paroxysm, increasing in frequency, severity, and length of duration, till at length they attained to a degree of intensity and frequency of recurrence, which subjected him to almost constant suffering, culminating at times in fits of agonizing distress. The description of one of these fits, as given by the sufferer himself, presented all the distinctive physiological symptoms of a paroxysm of stone; and, strange to relate, the case had been treated during this long period by numerous physicians, most of whom concurred (as stated by patient) in diagnosing stricture of the urethra, the "stricture" having been found impassable by several.

We found the patient lean, haggard, feeble and dejected, with capricious appetite, impaired power of digestion and irregular bowels. Finding a highly sensitive and irritable condition of the mucous surfaces of the urethra and bladder along with great erethism of the whole nervous system, chloroform was administered to thorough anaesthesia, in order to render our physical exploration more satisfactory to ourselves, as well as to save the patient the agonizing distress which would, of necessity, have resulted from such interference without its aid. Presuming from the previous history and present symptoms, that the "stricture" was only a functional one, and so stating my conviction I proceeded to introduce a well oiled No. 10 silver catheter, which finding its way but with slight difficulty into the bladder, impinged against a rough solid body, which, when struck by the instrument, manipulated as a sound, emitted quite an audible "click." Withdrawing now the catheter, whose place was taken by a suitable sound, the "click" was repeated so intelligibly as

to articulate the unmistakable language of the surgical disease. This sounding, conducted as it was, in the most gentle and cautious manner, provoked a pretty sharp cystitis marked by prominent neuralgic symptoms, which resisted for several days, our earnest efforts to relieve it.

Subjecting the urine to chemical analysis, and finding it laden to saturation with phosphatic salts, and mingled largely with muco-pus, our patient was put upon the usual preparatory treatment for an operation.

In a few days, however, and despite every care, a severe seizure of cystitis supervened, defying for several days every appropriate means to arrest it. This inflammation at length yielding, left behind it a neuralgic state of the bladder which could (so long as its existing cause remained) only be palliated, and that by the employment of the most potent nervines.

Our patient becoming progressively more emaciated and enfeebled, and without hope of permanent benefit from medicine, we decided, notwithstanding the very unpromising nature of the case, to give him the only remaining chance for safety which in our opinion resided in immediate extraction. A few decades back, no question would have arisen with the surgeon as to the method applicable to any particular case of vesical calculus, lithotomy then being the only established procedure for all such cases. Not so, however, at this advanced period of our art, since lithotrity now lays successful claim to much the larger proportion of all cases of stone. The extreme hyperesthesia of the entire genito-urinary tract, with its proneness to light up into a blaze of inflammation at the merest touch, set up and sustained by the urinary excretion, containing in large excess phosphatic salts, together with a calculus of large size which had held possession of its vesical abode for more than fifteen years, as well as the extreme constitutional debility entailed by these long-continued sources of exhaustion, forbade our entertaining the hope of successful lithotrity in the case before us.

Lithotomy alone remaining as the expedient applicable to the case, on the 26th of March, an ounce of brandy having been premised, the patient, free of trepidation and misgiving, went reluctantly under the influence of chloroform. The administra-

tion of the anaesthetic having been confided to the careful hand of Dr. James Layne, of this City, who courteously proffered his aid for the occasion, with the staff in the hand of my late assistant in practice, Dr. Rayfeild, and the patient bound in the proper position, I proceeded to perform the lateral operation in the ordinary manner (except as respects the first incision, to which reference will be made in the subjoined remarks,) extracting a stone of the size and shape of a hen's egg, compressed from side to side, rough and irregular over its superficies, and made up of concentric laminae, disposed round a nucleus, and composed, chemically, of the triple phosphates. The bladder was found encrusted throughout a large extent of its mucous surface with a similar concretion, which having been gently pulled off with the index finger, the organ was thoroughly washed out with the syringe. A small amount of blood, not more than two or three ounces altogether, was lost, every care being used to prevent free haemorrhage.

Patient was put to bed half an hour from commencing first incision, and reaction being slow and imperfect, external and internal stimulants were freely employed to promote it, along with a grain of morphia, for the triple purpose of assisting the first named remedies, relieving pain and quieting the bowels.

Two hours later, reaction complete without being excessive,—patient expresses himself more comfortable than for weeks before.

Finding the indications now so clearly to be, to support and to soothe the system, we put our patient at once upon quinia in solution with a mineral acid, the tinct. ferri chloridi, in full doses, an occasional opiate, and concentrated nourishment, allowing the urine to flow through the wound without the introduction of tube, a plan which we much prefer to keeping in a catheter, interfering with the wound only so far as is necessary to keep it cleansed.

Convalescence, as was expected, was slow and tedious, interrupted by backsets, several times occasioned by dietetic imprudences on the part of the patient. Two months and a half elapsed before the wound entirely united, which is not remarkable when we consider that the plastic forces of his system were

reduced to their minimum. Nitric acid was continued for several months in reference to his diathesis, the patient recovering the meanwhile his wonted measure of flesh and strength. No further trouble; health now (1869) perfect.

2.—Mr. J. M. brought his little boy, aged four and a half years, for examination for vesico-urethral disorder, which had existed since the sixth month of infancy, occurring paroxysmally, the whole history of the symptoms being that of stone, although pronounced stricture by several physicians. The little patient was much below the ordinary stature of infants of his age, having been dwarfed by innutrition and long suffering. Chloroform having been administered, a sound of small size was introduced with considerable difficulty, the urethral canal being so small as to grasp the instrument tightly, rendering its manipulation in the bladder no easy task. A little patient manœuvring, however, brought the sweep of the "lob" of the instrument over the calculus, eliciting a well pronounced "click," high in pitch. This sounding provoked a paroxysm of cystitis which yielded to appropriate treatment in a few days. The urine having been tested and found to contain an excess of lithates, an appropriate course of medication was instituted with the view of amending the general health for an operation by means of which he should be rid of his stone. All authorities, I believe, concur in conceding this class of cases to lithotomy, so we were not long in discussing the method of extraction applicable to this particular one.

On May 1, 1866, one month from date of first sounding, having attended to the requisite preliminaries, and having verified our diagnosis by sounding again (which may be done quite satisfactorily with the staff to be used on the occasion) assisted by Dr. B. F. Euds and our lamented friend, Dr. T. Kavanaugh, I performed the lateral operation, differing in no way from the ordinary procedure, excepting, again, as respects the first incision, extracting, in a few minutes, a calculus of ovoidal form, one and a quarter inches in length, by three-quarters of an inch in breadth, and one-half inch in thickness, quite smooth and symmetrical in arrangement, and of the hardness almost of marble, composed chemically of lithic acid. Not more than two ounces of blood

were lost from the incision. Nothing of special interest occurred in the subsequent history of the case, the little patient reacting beautifully and going on uninterruptedly to complete recovery, the wound closing finely on the eighteenth day. A course of alkaline treatment, continued for several months, with careful attention to regimen, effectually cured him of his diatheses.

The exception made to the usual manner of making the first incision in lithotomy, as referred to in the above reports, consists simply in the exercise of more caution at this step of the operation, going not so deeply into the perineum as we are directed to do by most surgical writers on the subject. This very common fault of lithotomists generally, and uniformly applicable to the "time men," is very justly disposed of by Mr. Holmes in his "*Surgical Treatment of the Diseases of Infancy and Childhood*," in the following transcription which we make from his excellent work :

"There seems to be an idea in the minds of some surgeons that there should be something unusual about the first incision ; that it is necessary to stab the point of the knife deeply into the perineum at first starting. But this is certainly not necessary, and I do not think very safe. The point at which the groove of the staff is to be opened is at no great depth, far less than is ordinarily reached in the extraction of a tumor ; the time required to cut down to this depth in the usual manner is quite insignificant, so that there is no reason for making a stab wildly into the tissues of the perineum, instead of cutting through them in an orderly manner, and feeling, from time to time, for the staff."

We have selected the above detailed cases from among our lithotomy operations, as furnishing good illustrative types of those classes to which the cutting operation is especially adapted, and in which there would seem to us insuperable contra-indications to lithotripsy, viz : 1st. Cases of stone of medium size and above, occurring in males during infancy or childhood, in which subjects the urethral tube is small in calibre and rendered highly sensitive by the disease. 2d. Cases of large stone in the adult, with extreme irritability of the urethra and bladder, with proneness to inflammation, even though the urethral canal should preserve its normal size.

It will be matter of interest and profit, we deem, to the readers of this journal, who have not enjoyed the opportunity of reading their latest publications, to transcribe from their most recent writings and lectures, the opinions of the most authoritative British surgeons on the subject.

In a very instructive paper (published in Guy's Hospital Reports, third series, vol. xiii) Mr. Birkett gives the results of the operation for the removal of stone from the human bladder, performed in Guy's Hospital during the last ten years, viz: from 1857 to 1866, inclusive. The number of patients who submitted to the surgical operation was 162; of these 160 were males, and two females. The youngest was one year old, and the oldest 77. Of the whole number, 162 cases, 137 recovered from the operation; and of these 134 were cured, twenty-five died, the remaining three not being cured.

From an analysis of these cases, Mr. Birkett arrives at the following conclusions bearing upon our subject:

1. That in the early periods of life, before puberty, lithotomy may be performed with almost a certainty of success.
2. That the operation for the removal of a stone from the bladder of adult patients admitted into hospital, is attended with increasing risks to life as age advances.
3. That in consequence of delay, many cases are precluded from the advantages derived from the operation of lithotripsy.
4. That upon adults the operation of lithotripsy was more frequently performed than lithotomy.
5. That lithotripsy, in select cases, is a successful operation.
6. That on the class of patients operated on, lithotripsy was followed by active organic disease of the kidneys, which was the cause of death.
7. That the risks from both the operations increase with the length of time the stone has been forming in the bladder.
8. That the mere fact of the duration of the disease does not preclude a successful result after lithotomy.
9. That the immediate cause of death after lithotripsy, is disorganization of the kidney, and the effects thereof.
10. That lithotomy may be attended with success in some cases in which lithotripsy, from specific local conditions, is not practicable."

Sir Henry Thompson, (British Med. Jour. Aug. 10th, 1868,) from an analysis of 100 cases of stone, operated upon by himself in the three years next preceding his report, deduces the following propositions :

1. That lithotrity is the most successful operation for at least four-fifths of all cases of stone in the adult, which come under the surgeon's notice at the present time, a statement, which is more definitely expressed in the fact that the rate of mortality of such cases in this series, is scarcely five per cent.
2. That lithotrity can be thus successful only when it is performed on a definite system, in accordance with certain practical rules, which experience has determined and which can be laid down.
3. That cases of calculus, in which one of the two operations —lithotrity or lithotomy—ought not to be performed, are exceedingly rare.
3. That by exercising an ordinary degree of vigilance for adult patients suffering from symptoms of urinary disorder, every case of calculus may be discovered in an early stage, may be successfully treated by lithotrity, and consequently, that the operation of cutting for stone may be rendered obsolete, or applicable for some very exceptional examples, which has been developed as the result of extreme neglect or ignorance.

Holmes Coote draws these deductions (St. Bartholomew's Hospital Reports, Dec. 1868,) from his experience in St. Bartholomew's :

"That the dangers from lithotrity are not wholly imaginary, may be inferred from the statistics of the hospital. It appears that the mortality from the operation is as high as 33. per cent., while from lithotomy it is only 18. per cent. But here we must correct an error, for, if the young under twenty years are withdrawn, the mortality after lithotomy is often above 50 per cent."

In his recent work (*Surgical Treatment of the Diseases of Infancy, &c., 1868*) Mr. Holmes thus refers to the subject: "I do not fear the imputation of clinging to old fashions, when I avow my strong conviction that in children (by which I mean in males below fifteen) there is no method so safe and so efficient as lateral lithotomy."

That veteran and most accomplished surgeon, Sir William Fer-

gusson, in his elegant lectures on the "Progress of Anatomy and Surgery," thus discourses on this important point, which we have to consider and decide upon in every case of stone :

" Age seems to me to form a most important element, especially in the male. It may reasonably be doubted if better can be done before fifteen than cutting for stone. The success of lithotomy in young subjects is probably greater than could be secured by lithotrity in similar cases. Taking my own experience, announced last year, of only two deaths in fifty operations, I have no hesitation in stating my conviction that I could not have had equal success with lithotrity in these cases. In some the process would have been well nigh impossible, as with stone of large bulk ; the diameter of the urethra would have precluded the use of a lithotrite of sufficient power. Looking to the size of the urethra in the male before puberty—its length, its irritability, the comparative irritability of the bladder and of the system generally ; and I may add the conical shape of the bladder, whereby there would be a greater tendency to blocking and retention than in the adult, I feel justified in stating that where the operation might require repetition, it would certainly, although ever so successful, be attended with an amount of distress to the patient, and probable trouble to the surgeon, far greater than any supposed advantage. I confess, however, that I do not think the subject has been investigated. Until within a few years there were no instruments that could have been used in such cases. To the best of my knowledge there were none such as I displayed in the theatre last year, but if blades like these (showing a variety) would be brought against stones, such as are usually found in young persons, so as to effectually crush them to sand, I believe that this operation might after all be found more generally applicable in children than it is usually deemed. As an adjunct to this kind of practice, chloroform would be indispensably necessary; without it the needful quietude would not be secured."



ART. VI.—*Remarks on the Anæsthetic Action of Chloroform in Parturition:* By W. K. FORT, M. D., Jefferson City, Ia.

The advantages and disadvantages of chloroform as an anæ-

sthetic on the parturient female, has been the subject of much animated discussion both in Europe and this country, since its earliest introduction by Dr. Simpson, of Edinburgh, into obstetric practice. Like many other great and valuable acquisitions to medical science, chloroform, as an anæsthetic, has had its praise and abuse from medical men, whose high position entitle their opinions to our grave and serious consideration.

To attempt to present even a synopsis of the conflicting views entertained for and against the use of chloroform as an anæsthetic, would extend this communication to too great a length. We have used chloroform in obstetric practice since 1856, and its extreme value in relieving the sufferings of the parturient female, and promoting her recovery, induces us to offer the following remarks: In the first place chloroform does not leave the patient in that extreme exhaustion which almost necessarily follows a protracted and severe labor, rendering the woman restless, and obliging the practitioner to employ opium to procure sleep. Secondly, the female of the most delicately sensitive nervous excitability, whose resources of muscular force and strength may not be more than just sufficiently adequate to sustain her through the efforts of a prolonged and difficult labor, would often unquestionably sink, by the overwhelming shock given to the nervous system, were it not for the controlling influence of chloroform. Thirdly, statistics will, we think, justify the assertion, that fewer of the dreadful and disagreeable consequences following parturition are met with after the use of chloroform, than in the same number of difficult labors where it is not used—such as metritis, convulsions, uræmia, child-bed fever, vesico and recto-vaginal fistulæ, rupture of the womb, vagina, and perinæum. For instance, in those cases of labor where there are powerful and violent contractions of the uterus, and a sthenic, non-yielding condition of the muscular striae of the vagina and perineal muscles, or of the muscular structure of the womb itself, contractions may occur so violent and powerful as to absolutely produce a solution of continuity, before obeying the laws of nature in extrusion of the uterine contents. Hence we say again that the wonderful contracting effect of chloroform is very potent, and it here comes as an angel of mercy to the sufferer, and brings hope inexpressible to

the accoucheur. We do not believe that where rupture of the womb occurs, there necessarily pre-exists a structural defect of the part; but, instead, a spasmodical rigidity, a want of abeyance of the nervous reflex influence, similar to that which exists in hour-glass contraction, parts of the muscular structure of the uterus acting violently, while other portions are in a passive or inactive state. It is in this condition, particularly, that the equalizing and contracting influence of chloroform over the nerve centers most happily asserts its sway.

In the spring of 1856, in Macon Co., Alabama, a case illustrative of the above described condition came under our care. We had strong reason to suspect a deranged nervous condition of the spinal marrow, or excito-motor influence, materially affecting and deranging the normal actions of parturition. When we speak of the diastaltic, ganglionic system, we use it in the sense in which Sir Marshal Hall has, viz., that the "spinal marrow is the essential and true sympathetic." Of course then, from the spinal marrow principally, the thoracic, abdominal and pelvic viscerae receive, through the nerves distributed to them, their reflex action.

Mrs. Sarah C., aged thirty-five, mother of eight children, small, nervous and delicate, but a well formed woman, and had usually enjoyed pretty good health. While descending a steep stairway, with a bucket of water, stumbled and fell, sliding to the bottom of the steps; her back, using her expression "striking more on one side" each successive step, till she reached the last one. I was called to see her immediately after she received the injury; found her suffering greatly; much pain and partial paralysis on one side; disturbing particularly the hip and leg of the injured side. She was also strongly threatened with abortion, being two months advanced in pregnancy. The necessary treatment was given to prevent expulsion, and to relieve the pain as much as possible. Her partial paralysis and feeble health continued, though somewhat improved, till the full term of utero-gestation. Was called to see her in labor, just seven months after the injury was received. Found her with sluggish pains, and at long intervals, the os very slightly dilated, but hard and firm, perfectly unyielding. Gave the nurse instructions to watch her closely, and when

the pains became threatening to send for me. Fourteen hours elapsed before Mrs. C. was again seen. Her pains were now more frequent and strong; os almost the same, very rigid and unyielding. Gave a little stimulant, and in a short time afterward her pains became so powerful and exeruciating, as to excite my fears for her safety. The pains, in a short time, became so insupportable as to cause syncope, and yet the hard unyielding condition of the os remained undiminished. This distressing condition continued for hours, and my patient became exhausted, notwithstanding stimulants were used. She would faint at almost every pain, and this did not appear to relieve the contracted and unyielding condition of the os. I determined now to give chloroform. Under its influence, she rallied rapidly; although not rendered unconscious by the inhalation of equal parts of alcohol and chloroform. The pains seemed to be more steady and uniform; a more consentaneous contractile effort of the womb commenced, and the non-yielding hard condition of the os speedily gave way. She bore the succeeding pains with much composure and fortitude, and was successfully delivered, saved from rupture of the womb, perhaps, and almost immediately from death.

We have observed that Mrs. C. is a small, nervous, and delicate, but well-formed woman,—that the spinal column, seven months previous to confinement, had received an injury from a fall which had left the nervous influence materially deranged on one side; which condition remained, together with feeble health, up to and after confinement; that the hard, unyielding condition of the neck of the womb, together with the exceedingly peculiar character of the pains, strongly suggests, that by reason of impaired reflex action, the contractile efforts were correspondingly interfered with over parts of the whole contracting organ, *i. e.*, there being a want of consensual nervous reflex influence, a corresponding deficiency of consentaneous contractile efforts over portions of the organ resulted, while other portions were in a relaxed condition, thereby producing those torturing pains, which were almost nugatory towards accomplishing expulsion. Granting then the position taken to be correct, that a large number of painful and dangerous labors do not depend upon malformation or physical deficiency, but upon a want of natural and

sufficient nervous influence. We believe we have described in the case of Mrs. C., a condition which is but an exponent of a comprehensive lesion, embracing a great number, masked and presented under different liveries, and chloroform, if judiciously administered at the proper time, and not carried too far, would, we have no doubt, do away with much unnecessary suffering. None, we think, will deny, that reflex action is the great physiological power, which influences the functions of extrusion. Volition, emotion, peristatic action, the diaphragm and abdominal muscles are all accessories, but by no means indispensable to accomplish extrusion, where there is a free, unembarrassed action of a healthy womb. We do not believe the action of the womb in parturition is paralyzed by the use of chloroform, as has been asserted, but the aid which it receives from the abdominal muscles, is, perhaps diminished in some instances, and particularly so, if pushed to a state of stertor. We have seen a case, where the pains were increased by chloroform, although in the intervals, the patient was in a sound sleep. Scarcely have we ever seen a case of labor, where it was necessary to push the anæsthetic to a state of profound unconsciousness, but on the contrary, we have obtained the greatest advantage, when used just sufficient to reduce pain to a tolerant point. The remarkable difference in the amount of pain, which women experience when going through natural labor, proves the value of chloroform most conclusively. Some suffer comparatively little; at no period of labor are the pains beyond the power of endurance; chloroform is quite unnecessary then. But there are cases in which the patient is acutely sensitive, when even slight pains cause great distress, and the more powerful ones become so intolerable, and cause such an amount of suffering, that the actions of the womb are even suspended. It is in such instances that the practitioner may look to chloroform as his sheet-anchor of hope.

To present in a few words, the conditions in which we would insist upon the urgent necessity in the parturient woman of using chloroform, we would say decidedly in all painful or irregular, or excessive uterine action and rigidity of the neck, nervous excitement and intellectual disturbance. Conditions do exist in which

we do not deny that chloroform would be ill borne by the patient; in all cases where there is a diseased condition of the brain and heart, or a tendency to epilepsy. When we use chloroform by inhalation, we prefer to have the patient's stomach empty. If there be an asthenic and generally weak condition, a glass of wine or a little brandy and water before inhalation is not objectionable. We prefer one part of chloroform and two of alcohol, or washed ether, inhaled through a linen handkerchief, rolled in a funnel shape. The impression should be gradually and gently induced, by applying the handkerchief less than half saturated with the mixture, over the mouth and nose, so as not entirely to exclude the atmosphere at first, but wait till a few inhalations have been taken, that the patient may accommodate herself to the tendency of strangulation, which is sometimes a little troublesome. The primary effect of chloroform upon most persons is as an excito-motor stimulant; the second, a sedative, carried further, a narcotic. The first impression usually given to the patient is a rapidly thrilling sensation, strikingly similar to a gentle electrical shock, *i. e.*, giving an indescribable sensation of a light and buoyant feeling of strength, which is not altogether imaginary, for we have seen persons accomplish feats of strength under its influence, which would have been almost impossible, otherwise than produced by a powerful impression upon the dynamics. Push the action beyond this point and the influence is not so thrilling. There is now an indifference to muscular exertion—the patient seems inclined to yield to the happy tranquilizing hallucinations of mind. Yet the patient is not totally deprived of voluntary muscular effort. The next condition is a loss of consciousness, sensation and voluntary motion. The motor or reflex action continues after sensation and intelligence cease to exist.

The *modus operandi* of chloroform is not so easily described. We, however, believe the impression upon the nervous system to be effected directly through the circulation. We cannot accept the statement of Dr. Faure's method, in which he states, that chloroform and carbonic acid produce anaesthesia, viz., "That the result of inhalations of chloroform is the impairment of respiration. Chloroform, he states, modifies the portions of pulmonary

substance with which it is brought into contact in such a way as to render them impermeable to the air, in virtue of its power of coagulating albumen, and hence interferes with respiration; and the anaesthesia it causes is asserted to be merely one of the early symptoms of asphyxia." In support of this novel view, he offers the following ingenious experiment. A caoutchouc tube, having one end attached to a vessel containing chloroform, was passed down the trachea, *beyond its bifurcation into* one of the bronchi (a medical impossibility we think) and a large quantity of chloroform was so inhaled by an animal; but no anaesthesia was caused. The tube was then so far withdrawn that *it did not extend to the bifurcation*, and after a very few inhalations complete anaesthesia ensued. During this condition, it was again advanced *beyond the bifurcation into the bronchus*, and although chloroform continued to be inhaled, the anaesthetic condition gradually disappeared. Dr. Snow states, that chloroform vapor extinguishes a flame, and reasons that if it stops the combustion of a taper, so does it by its catalytic action stop the combustion of blood, and from this arrest all the after phenomena of anaesthesia take their origin. We would, with deference ask these gentlemen how it is, that we have the same anaesthetic condition produced when the patient swallows the chloroform? May we not conclude, that there is yet need of further investigation of this subject, to yet more clearly ascertain what may or may not be the peculiar physiological action on the fluids by this agent, if in fact, as is claimed by high authority, that actions do occur sufficiently to interfere with, or suspend functions necessary to sustain animal life, it would be equally fair, upon Dr. Faure's theory, to suppose that the coagulating effect of the chloroform introduced either by inhalation or by swallowing, would be carried through the circulation as has been proved, and that albumen of the circulating fluids and of the lining serous membranes of the circulatory system as well as the pulmonary mucous membranes, should all be coagulated by the same influence. Yet the very speedy resumption of all the functions of the body, in so short a time after the anaesthesia is left off, is, we think, *prima fascia* evidence that the position is quite untenable.

With regard to the statement of Dr. Faure's experiment upon

animals, with the gutta percha tube, we regard it so perfectly illogical as to require no argument to set it aside. The assertion of passing a tube *into the bronchi*, alone robs the more feasible features of his experiment of its claims to an exposition of facts.

In conclusion, we do not deny that, in several thousands of cases, where chloroform is indiscriminately and carelessly used, without regard to condition of the brain and heart, or peculiarity of system, occasionally a fatal result happens. But this would be a flimsy pretext indeed, to cause the abandonment of so valuable an agent. Several of the more common remedies of the *materia medica* do sometimes, on account of peculiarity or idiosyncracy of system, act poisonously, and even destroy life; but the profession do not think for a moment of abandoning their use. Take the accumulated experience of intelligent and reliable physicians, whose observations have extended through a series of years, and hear them answer the question, whether by the use of chloroform in difficult labors, they have lost or saved more patients by its use, and we think by a large majority, the answer given, will be in favor of the anæsthetic. It is by the practical application of most things that we test their value. If the physician saves more women by its use than without it, in the aggregate, it does not matter to him when or where, here or there. It is still the theory of truth. Some have claimed that the vapors of chloroform, when inhaled by the parturient mother, has a highly deleterious influence on the child. We can candidly say that we have never seen any unpleasant results from a careful use of chloroform, and believe the hear-say reports are the most disagreeable things to contend against in its use. We would prefer to follow this rational mode of investigation and not to be led off from it by *post hoc ergo propter hoc* arguments; we do not believe that all the well-known casualties of labor are caused by chloroform because it happens to be administered. We should not take second-hand histories of its effects, but as the members of a scientific profession are bound to do, take nothing for granted, but examine and judge for ourselves.

ART. VII.—*Communication to the Greensboro, Ala., Medical Society:* By Dr. F. M. PETERSEN. Read before the Society at its regular meeting on the first Monday in January, 1869, and published by order of the Society.

NEW YORK, December 26th, 1869.

GENTLEMEN—My engagements during the past month prevented me from enjoying the pleasant duty of communicating with you, and even now I have so little leisure that I am sure I can not do justice to any subject. Nevertheless, in accordance with my promise, and as an evidence of my gratitude for your kindness and professional courtesy to me, I will do the best I can under the circumstances.

In my first communication, I informed you that after making inquiries in regard to the Medical Colleges of this City, and after examining for myself, I am satisfied that the University of New York presented advantages *superior to any other*. I am gratified to be able to state, after having had ample opportunities for forming an opinion that I am decidedly pleased and *gratified* that I, and my students matriculated in this institution. The corps of Professors are, I think, eminently qualified for their duties, *and if not superior*, will certainly compare favorably with any other Faculty here. The hospital advantages belong alike to all the Schools—no one having the exclusive right to any one hospital.

The impression which prevails in the South that the Bellevue College has the management of the Bellevue hospital, and that their "*Didactic Teaching*," *is in that hospital*, is *not correct*. It is true that the College building is very near the hospital, still the students and Professors are not entitled to any rights or privileges which do not belong in common to all the other medical colleges. Two of the Professors of the University of New York, and two from the College of Physicians and Surgeons, are Visiting Physicians and Surgeons to the Bellevue hospital. All the hospitals in the city are accessible, and their advantages may be enjoyed by students of any of the Medical Colleges. These advantages are very great, affording the industrious student ample clinical opportunities for making himself familiar with almost every disease "*flesh is heir to*," and the latest and most scientific methods of *curing them*.

The practice of medicine is undergoing a *revolution*. You are doubtless prepared to hear that the lancet is about being numbered with the remedial measures of the "past." The Professor of Materia Medica in the University of New York, in speaking on the subject of direct depletion, a few days since, remarked, "that he would not say that venesection *was never* indicated in any disease, but that *he* never used the lancet—that he had some *sad* experience on the subject, that he was very nearly killed outright by a too copious blood-letting, and never employed it as a remedy. He spoke of the great influence of Rush and Wood in favor of the lancet, of its abandonment by Watson on account of an alleged change of diathesis,—of Jno. Hughes Bennett's doctrine "that the abandonment of this remedy is not on account of any change in diathesis, but attributable to advances in Pathology and Therapeutics," and finally remarked, "that after reading the clinical reports of such influential and careful observers as Rush, Physic, Chapman, *id est omni genus*, in favor of the lancet in all inflammatory diseases, and seeing that we must now throw all this into the rubbish of the past, we are almost led to doubt all medical observations." I quote from memory, and do not feel sure that I have given the exact language, but certainly the sense of what he said.

Pneumonitis a sthenic disease, in stout muscular subjects, is not only treated without direct depletion, but without any depletion at all, and moreover without any medicine whatever. The only remedy (?) used is an *oil silk jacket* over the whole chest, anteriorly and posteriorly—applied to the surface of the body. In my visit to the wards of Bellevue hospital, on Saturday last, I saw cases of this disease in very stout robust subjects under this treatment, and was informed by the Professor who went around with me, that this, with proper hygienic regulations, was all that was done for patients with this disease. "No calomel and Dovers Powder; no veratrum; no tartrate of antimony; no cups; no leeches, no blisters, no foot-baths, no diaphoretics, no diuretics, no stimulants in the progress of the disease," said I.—"No," Said he—"Well in some rare instances we may administer stimulants in the last stage." The treatment of nearly all forms of disease of whatever kind is hygienic and expectant, both in hos-

pital and private practice, and very little medicine of any kind is given. Calomel and blue pill are almost as unpopular as the lancet. I have attended the lectures on the different forms of fever—intermittent, remittent, *pernicious* intermittent, pernicious remittent, typho-malarial, yellow fever, typhus and typhoid, and not a single dose of mercury was advised, except in remittent of a severe form a cathartic dose of ten grains of calomel might be given at the outset if constipation existed, but it was not often indicated except for this purpose and at the onset of the disease. I followed this same professor through fatty, amyloid, cirrhotic, hydatid, and other degenerations of the liver, and the treatment, and not a dose of mercury was recommended and very little medicine of any kind. The following pill was given for the constipation and jaundice occurring in the progress of degenerations of the liver, and for functional jaundice also :

R. Ox-gall..... Di,
Gum Alœ pulv..... Dss,
M. ft. in pil. No. x. S. One pill at night, or enough
to produce a free alvine discharge in the morning.

In the treatment of malarial fevers *quinine* is the only medicine, as a general rule; in some cases arsenic, and in cases which become anaemic, iron. In typhus the treatment is entirely hygienic, except a mild, simple laxative at the onset. In typhoid no medicine is given, except to control the diarrhoea in the second or third stage, if it becomes very excessive and prostrating. The hygienic management consists in taking out all the windows in the patient's apartment, and not only allowing a free ingress of air, but a direct current upon the patient. When the disease prevails to any considerable extent, amounting to anything like an epidemic, the subjects of it are carried to Blackwell's Island and placed in tents temporarily prepared for the purpose, where they can have a strong breeze from the water, and this is allowed to blow directly upon them. It is said that since this plan was adopted, and the stimulating treatment abandoned, the mortality—"the death rate"—has fallen to less than one-half. The diet is the only restorative used.

Podophyllin is sometimes recommended in constipation, in the

onset of diseases, and very generally for habitual or dyspeptic constipation, as in the following formula :

R:	Podophyllin.....	grs. xv,
	Ext. Colocynth C.....	3 ss,
	Ext. Belladonnæ; Ext. nuncis vomicæ.....	aa grs. v.
	M. ft in pil. No. xx.	S. one or two pills.

This pill was very highly recommended by Prof. Budd, in the constipation of pregnancy, a few days since.

The Professor of *Materia Medica* has devoted his time, up to the present, in discussing hygienic measures, prophylaxis, etc., and will not get to medicines proper until some time in January. I mention this fact to show you that *they* are considered of *secondary* importance. Quinia, iodine and its preparations, iron in various forms, *cod liver oil*, and the bromides of potassa, ammonia, etc., are prescribed more frequently than any other articles of the *materia medica*. Cod liver oil is a great remedy here (not a medicine ?)—it is said to cure by acting as a nutrient. It is used in nearly all cases of debility, and in serofula, tuberculosis, and in most of the skin diseases.

The ancient method of rubbing the body with oil is revived here, and is becoming very popular. It is used in all cases of disease in which there is a dry and harsh skin. From what I have seen of this *new* (old) treatment, I am inclined to think very favorably of it.

In the treatment of secondary and tertiary syphilis, the only plan is the *mercurial*, the hydrarg. bichl. being the form employed. The iod. potassium is occasionally employed in syphilitic adenitis.

Our Professor of Dermatology has presented a great number and variety of skin diseases, which are very much more common here than in our climate. The treatment for nearly all forms consists in the administration of the sol. of arsenite of potassa, or cod liver oil, and the use of the “bran and alkaline bath;” and locally, solutions of potassa fusa, carbolic acid, [and] ung. zinci oxidum. This treatment has been quite successful.

A new treatment of talipes varus and talipes equinus, and other varieties of this deformity, has been lately introduced by Dr. Quinby, of Brooklyn. It consists of *forcibly straitening* the foot

and leg, and maintaining them in the proper position by means of *adhesive straps*. No division of tendons, no operation of any kind is performed. It requires very little effort to straighten the deformed foot, and not much strapping to keep it in proper position. *Remarkable success* has attended this new treatment of club-foot. I have seen little children walking around as if no deformity had ever existed. Of course the treatment must be practiced within the first two or three years of the child's life. This treatment is so simple that it may be applied by any physician, and involves no risk of any kind. I can strongly recommend it.

The improvements in the management of the diseases of the eye and ear *are marked*, and have resulted chiefly from the improved methods of diagnosis, by the use of the eye and ear speculums, the ophthalmoscope, etc.

In the treatment of stricture of the urethra, not readily cured by dilatation, a modification of Symes' operation of urethrotomy is practiced; the after treatment being to leave the wound to take care of itself, not wearing any instrument in the urethra for the wound to heal over. The operation is simple and easily performed, and proves successful in a great majority of cases. A staff is introduced into the urethra, and if possible through the strictured portion, and a longitudinal incision is made down to the staff, and the stricture divided freely in the direction of the canal, and a few lines into the sound tissues. The patient is then put to bed and no other treatment used until the wound begins to heal, which is generally about the end of the second week, when the urine will cease to pass through it; then as it cicatrizes a metallic bougie is passed occasionally to prevent reformation of the stricture. The fatal results which formerly attended this operation were, no doubt, due to *wearing* the instrument in the urethra, which kept up a constant irritation, and finally produced inflammatory action in the urethra and bladder. At first it was deemed indispensable to *wear* the instrument, but by shortening the time gradually, in a number of experiments, it was first reduced to forty-eight hours, and at length dispensed with altogether. This operation is successful in the worst cases, even where perineal fistulæ has occurred, some cases of which I have witnessed.

In the surgical treatment of uterine diseases the work of Sims represents the latest views of the profession. There is, however, a still later work on the subject, by Thos. Addis Emmet, of the Woman's Hospital, in this city, but I do not think it as well adapted to the wants of the general practitioner as the work of Sims. Still it might be well to obtain it, as it is *proper to know all we can on this subject*, and even then we will find difficulties enough to contend with. The best work on gynæcology which I have seen, and I think one of the best ever published in this country, is by T. Gaillard Thomas, Professor of Obstetrics and Diseases of Women in the College of Physicians and Surgeons, of this city. I would advise all to get it.

The abandonment of chloroform as an anæsthetic in hospital surgery, is a noticeable fact. Ether is employed *exclusively* in all the hospitals. It is alleged that this change was owing to the fact that accidents occasionally occurred from the use of chloroform, notwithstanding the greatest possible precautions to avoid them.

Pathology is *the great study* of the medical practitioners here. Everything is determined by the pathological changes—in the different excretions during life, and those found after death. The microscope and chemical reagents are constantly employed by all practicing physicians, and no *one thinks* of making a diagnosis in any serious case without resorting to these means. The perfection to which physical diagnosis is carried in this city by the use of all the various means, has been a matter of constant astonishment to me, and the prognosis, in many cases, not less so. I think it may be said that the old humeral pathology is about to be revived. The blood is now the medium of the action of *all* medicines, and *blood changes* the cause of nearly all diseases; "*all lesions commence here in a large majority of all diseases.*" In fact the nervous system is lost sight of, and is rarely noticed in speaking of diseased action. It is proper for me to remark, par parenthesis, that my views on this subject, so often expressed before the Society, have undergone no change, after all I have heard.

Chemico-vitalism, so far as the vitalism of it is concerned, is now entirely abandoned, and Prof. Paine and his Elements of Physiology are both super-annuated, in fact, perfectly dead. The

Drapers are the great physiologists and chemists here now. Prof. John W. Draper and his two sons, John C., and Henry, all Professors in the University. They teach the new doctrine of correlation and conservation of forces, and refer the rationale of every action in the human organism—not to any *vital principle* but to *chemical* action. The different functions in the body—secretion, excretion, circulation—all—due to chemical action. It is really very interesting to hear them, and to see how beautifully and satisfactorily (to their own minds) they account for all the phenomena of animal and vegetable life, upon chemical principles. I have lately understood that Prof. J. W. Draper proposes very soon to produce *milk* directly from *grass or clover*, and thus dispense with *cows*. I do not vouch for this, but I heard it amongst the students. They have already made *alcohol*, an organic compound, by uniting its chemical constituents: C. 4, H. 6, O. 2, in a way not readily explainable by your correspondent. Now this is a step in the *production* of organic compounds; why not produce *milk*, another organic compound, of water, 8.73; casine, 48; sugar of *milk*, 44; butter, 30; phosphate of lime, 2.30; other salts, 2.7—just in every respect similar to our *old-fashioned cow's milk*, so that we might get rid of feeding and attending cows, and also the villainous mixtures sold in this city under the name of Orange County *milk*. I think the next move will be to prove that man, *in his primordial state, was probably a tadpole*, and required nothing to elevate him to be the highest in the order, *mammalia*, but *chemical laws*!

Through the courtesy of the President of the Academy of Medicine, I had the honor of visiting that Society; was introduced as Dr. Peterson, of Alabama, which compliment I acknowledged by the *best bow* I could make. The proceedings did not differ very much from those of our little Society, and I have much pleasure in saying that our honored President fills the presidential chair with quite as much dignity, and quite as well every way, as the President of the Academy of Medicine, Prof. A. C. Post.

ART. VIII.—*Torsion and Transfixion as a means of arresting Arterial Hæmorrhage:* BY K. MCKINNON, M. D., Pleasant Hill, Ala.

THE ligature, as a means of arresting arterial hæmorrhage, has been almost entirely relied upon by surgeons, since the days of Ambrose Paré. There are, however serious objections to its use, although for a long time no better means were devised.

Almost ten years ago, Sir James Y. Simpson suggested the use of acupressure, which, upon trial, has been attended with wonderful success, and is now rapidly taking the place of the ligature, where small arteries are to be tied. The success of acupressure has aroused a spirit of inquiry and investigations among surgeons, and various other means have been suggested and tried.

In the last year or two, an old plan has been revived, that of torsion. In the hands of Prof. Syme, and other eminent surgeons equally wonderful results from torsion of arteries have been obtained as from acupressure.

Now, while the subject of arresting arterial hæmorrhage is being investigated, I hope it will not appear presumptuous in me to suggest a plan which has occurred to my mind, while reading and studying the many plans already brought to the notice of the profession.

The object desired is a means to secure the bleeding artery for a time until all danger of hæmorrhage is passed, and then the easy removal of such instrument without seriously disturbing the healing wound, so as to place it in the most favorable condition to heal by first intention. The ligature secures the artery against hæmorrhage well enough, but it cannot be removed until the part of the vessel ligated has sloughed off. Many days may be required, if the arteries are large, before this can be accomplished; in the meanwhile the patient must be considered in a critical condition.

Acupressure fulfils the indications well enough in the smaller sized vessels, but few surgeons feel safe in relying upon it to secure the larger ones. The same may be said in using torsion.

The plan, which has occurred to my mind the most capable of meeting all the indications required is that of *torsion and transfixion combined*.

Let the bleeding vessel be seized with a pair of torsion forceps, and twisted until it is reduced to a cord shape, so that no blood can pass through the twisted portion, then pass a needle from the cutaneous surface, as recommended by Simpson in acupressure, and, instead of passing the needle *over* the vessel to compress it, have it to *transfix* the twisted artery, and then pass it into the fleshy parts beyond. Thus the twisted artery is made secure against untwisting, and if the torsion is maintained, no haemorrhage can possibly occur. In this way the vessel is made as secure as it could be with a ligature, that portion of the artery which projects beyond the needle may be cut off as short as it may be thought safe, and the wound be brought together in the usual manner. In as short a time as it may be deemed necessary for the needles to remain, they should be removed, when all sources of irritation from staunching instruments are got rid of, the wound is then placed in the most favorable condition to heal by first intention.

It may be asked, where are the proofs that the plan here suggested of arresting arterial haemorrhage is a safe one ? and will it bear the test of trial ? It would have been gratifying to me to have tested it fully before calling the attention of the profession to it, but it might have been a long time before opportunities sufficient would have presented themselves to test the plan satisfactorily. Being mostly engaged in the practice of medicine, it is only occasionally that I have a case of surgery to treat. I have therefore concluded to suggest the plan to the profession, and if it is thought reliable, let those who have an opportunity give it a trial, and ascertain what advantages there may be in *torsion and transfixion combined*, over acupressure, or torsion used alone.

ART. IX.—*On Vesico Vaginal Fistula: A Review*, by R. FRASER
MICHEL, M. D., Montgomery, Ala.

WE have been expecting, for some time, to see a book upon vesico-vaginal fistula, from the pen of the distinguished operator, Dr Thomas Addis Emmet, Surgeon-in-chief of the New York State

Woman's Hospital, and our expectation has been realized by the appearance of a volume of 250 pages, published in New York, by William Wood & Co., and dedicated to Dr. J. Marion Sims, who first entered this field of medical inquiry, and has marked out almost all the important points upon which the profession now rely for success in this important operation.

The book contains an introduction and eighteen chapters, embracing a report of seventy-five cases operated upon. The mode of preparing the patient is fully detailed, as well as the necessary instruments, the method of operating which has proved most successful in his hands, and the after treatment.

The doctor has well classified his cases, viz :

1. Fistulæ from laceration of the cervix with or without sloughing, and involving a portion of the base of the bladder.
2. From sloughing of some portion, or loss of the whole base, with cases of atresia of the vagina, partial or complete.
3. Loss of the entire base of the bladder, the cervix uteri, and the urethra.
4. Some cases of recto-vaginal fistula, with points of difference in treatment or operation, not in common with the injuries of the bladder; and

Lastly, cases of recto and vesico-vaginal fistula, not resulting from parturition.

He opens the introduction by a statement well known to the profession : "That prior to the application of the metallic suture by J. Marion Sims, and a proper mode of exploration furnished by his speculum, any attempt for the relief of vesico-vaginal fistula was uncertain in result, and this operation regarded as an opprobrium by the profession."

We cannot agree with Dr. Emmet, however, when he says that *no more tact* is needed in the execution of this, than in many other operations of surgery. I believe the profession will bear me out in the statement that this operation requires no small degree of tact; in fact, that many skilful surgeons decline performing it all. Dr. E. finds it quite easy, no doubt, for his practice has furnished him, for the past five years, with nearly two operations a week, and we understand that he is a very beautiful and expert operator.

The author believes that most of these serious accidents occur among the poorer classes, who are unable to employ proper obstetricians, and that this difficulty is met with as frequently in Europe as in this country. Indeed, he says, "in my experience the injury has been an exceedingly rare one among the better class."

Dr. E. lays down as a principle, on page 15, "that scarcely any case can be regarded as incurable, in consequence of a loss of tissue alone." This may be correct, but we incline to the opinion that we have encountered one case which could never have been relieved, "*in consequence of a loss of tissue.*" However this may be, the advocates of the "interrupted silver suture" will find cases which will result in failure if operated on by that method.

There is one class of cases in which they will *fail very often* from the frequent repetition of operations. I allude to fistulous openings involving the whole of the vesico-vaginal septum, the root of the urethra, and the cervix uteri.

Another class is the reverse of this. When the fistula is very small and situated high up, and this condition occurring in a fleshy woman with a deep and capacious vagina, and disposed to resist the operation, in such a case I believe the ordinary appliances will fail.

I can probably better illustrate what I wish by giving, as a proper example, the case reported by Dr. Bozeman, in the New York Medical Record, when illustrating the advantages to be enjoyed by the use of his new speculum.

"The case referred to was one of vesico-vaginal fistula, occurring in a very stout, fleshy woman, weighing upwards of two hundred pounds. Early in October last she was admitted into that admirably conducted institution under the direction of the Sisters of Charity, the Hoboken St. Mary's Hospital, where my patients are now received.

The fistula was of six or eight months' standing, small, not larger than a pin's head, and occupied what we would ordinarily term a favorable position, being some three inches above the *meatus urinarius*, and near the edge of the septum, upon the left side.

The peculiarity and difficulties of the case were these: Ante-

version of the uterus, a convoluted or folded condition of the two opposing walls of the vagina, which was of immense size, and a plaited condition of the edges of the fistule, and the parts immediately surrounding it.

Assisted by Drs. Finnell, Connolly, Lynch, Metcalfe, and several other medical gentlemen of New York, and Dr. Chobert, of Hoboken, I undertook my usual operation, the patient resting upon her knees and elbows. My fourth size of the lever speculum, with a blade four inches long, one and a half inches wide at the heel, and one and three-quarter inches near the point, was employed; and although of such large size, this instrument, with spatulas and depressors brought to bear from various points by assistants, afforded us only an imperfect view of the very small fistule. The upper part of the posterior wall of the vagina came down in such immense folds over the end of the instrument, met by the same folded and protruded condition of the anterior wall, under violent and almost continuous expulsive efforts, that it became quite impossible to commence the process of paring the edges of the fistule, and to complete it in a regular manner. This stage of the operation, however, was gone through with, after the length of time indicated, only to be followed by a still greater difficulty and delay in the next—the introduction of our sutures—only three being called for. The patient, at this stage of the operation, was placed upon her side and chloroformed, which however, afforded us no relief from the surrounding difficulties.

Suffice it to say, the operation, after three hours, with five or six assistants, was finished, though in the most unsatisfactory manner it had ever been my misfortune to encounter before.

Now, after all our labor and annoyance, I felt that a failure was inevitable, and so expressed myself to the gentlemen present. The removal of our suture apparatus on the eighth day proved too truly the correctness of our misgivings as to the final result. There was a total failure."

Dr. Bozeman operated again upon this patient on the 20th of November, and with success, in the presence of Drs. Thomas C. Finnell, Thomas S. Bahan, Joseph S. Crane, and Dr. Chobert, of Hoboken, all of whom expressed their entire satisfaction at the result.

In chapter second, on instruments necessary for the operation, we do not find some which have elicited much commendation. For instance, Dr. Nathan Bozeman's spring and self-retaining speculum. Now this important instrument is being used everywhere, and we have no need to carry about with us several blades of different lengths in order to adapt the instrument to every case. We think a wood-cut of this instrument would have improved Dr. E.'s book, especially if the author had called attention to its value, viz: That it elevates the perineum, supports the upper part of the posterior wall of the vagina, dilates the labia majora and mouth of the vagina, distends completely and steadies the upper part of the anterior wall of the vagina, the vesico-vaginal septum. Every surgeon whose tact would admit of his performing these special operations should have one in his possession. Again: Dr. Bozeman has published and has demonstrated in the city of New York, as well as elsewhere, the incalculable advantages a surgeon gains in using his *operating table*. Dr. Emmet makes no mention of this. This table enables the surgeon to put his patient securely upon her knees, the body flexed at right angles, and the head and chest resting upon two beautiful cushions, while the anterior wall of the abdomen is perfectly flaccid and unincumbered by pressure. The anterior part of the thigh, from the patella to the groin, is firmly laced to a concave splint-supporter; a slight band falling over the small of the back prevents the patient's moving an inch during the operation. There is no fatigue, the position is not painful; we have tried it ourselves to determine the fact, and were as easy as in a rocking-chair. Dr. Emmet tells us, on page sixteen, that he was prevented from operating on cases, because, in consequence of the great irritability of the nervous system, *the patients were unable to bear a long operation on the knees*, which position he regarded as absolutely necessary for the cases in question. Now, Bozeman's operating table would have been just the thing; and we hope in another edition of this valuable book, which we are convinced will soon be required, that a wood-cut and a minute description of this table will be furnished.

Dr. Emmet's practice of turning the edges of the fistula and the cervix uteri into the bladder by a peculiar folding process,

strikes us as not a good plan, for this reason, that pouches are formed in the bladder which become receptacles for the urine, and calculus is almost certain to be formed. The doctor has treated over thirty cases in this way. I think the practice is opposed to sound surgery, and the turning of the cervix uteri into the bladder unjustifiable. Chapter VI treats of these cases; it is a very interesting part of the book.

We would call attention to the fact (as slight reference is made to it in this volume) that Dr. Sims published his clamp-suture operation in 1852, and if we remember correctly he was successful in relieving one out of two cases, fifty per cent. Now we have read of Dr. Bozeman's success with his button-suture operation, described May 1, 1856, and we believe his success was 90 per cent. Dr. Emmet's statistics show that he has cured 200 out of 270 cases.

This book is well printed, but the wood-cuts are miserable, badly shaded, and do not express what the author intends. We hope the next edition will be an improvement in this particular.

CORRESPONDENCE.

Letter from New York.—No. 3.

NEW YORK CITY, Feb., 24th, 1869.

DEAR JOURNAL:—We have been enjoying a most remarkable winter, as far as temperature is concerned. For the most part, the weather has been warm, and the season open. But it has not been a healthy season, by any means, and the old saying that "a green Christians makes a fat grave-yard" has been exemplified with us. The weekly mortality which was exceedingly low during the latter part of the Fall, has been gradually rising, and is still on the increase. We have had quite a number of cases of typhus fever and small-pox occurring in certain localities. These have been promptly reported to the Board of Health, and the premises effectually disinfected. Typhoid and scarlet fever have also claimed many victims, but the chief mortality has been from pulmonary diseases, the sudden changes

of weather being especially trying to those at all inclined to lung difficulties. The dampness and unwholesomeness of the atmosphere during the past week or two have been excessive.

The medical colleges have closed their sessions, and the different faculties are busily engaged in the examination of the large numbers of eager aspirants for the degree of M. D. The commencement exercises will take place in the course of a week or two, of which we may have occasion to speak when we write again. This winter at the colleges has been a remarkably quiet one, nothing of extraordinary interest occurring, and the attendance being about the same as during last winter.

On the third of the present month, the Medico-Forensic Society of New York, recently formed for the familiarization of physicians and lawyers with medical jurisprudence, and for the discussion of questions of importance to both the professions, held its first regular meeting at the residence of Dr. Beach, lately elected President of the Association. The question for discussion was concerning the validity of the will made by a person a few days previous to his committing suicide. After an interesting debate, in which several of the members freely engaged, the case being well argued on both sides, and no conclusion being arrived at, the subject went over to the next regular meeting.

The Medical Gazette which for several weeks past has failed to make its appearance, again appears amongst us, and resumes Dr. Pittard's translation of Hardy's treatise on the Scrofulides, with other entertaining and instructive matters.

The authorities of Jersey City have been recently engaged in the good work of establishing a charity hospital for the poor of their city, an institution which has been long needed in that place. The following medical men have been appointed by the Common Council, as Visiting Physicians: Drs. T. F. Morris, J. H. Voudy, A. A. Lutkins, M. A. Miller: and as Visiting Surgeons, Drs. J. W. Hunt, D. L. Reeves, T. R. Varick, and B. A. Watson. These gentlemen constitute the medical board of the hospital.

The New York City Dispensary has received the sum of fifteen thousand dollars from the Common Council, as a donation towards their new building now approaching completion. The

many friends of this truly charitable institution will be rejoiced at the knowledge of this generous gift.

A recent issue of a Philadelphia medical journal has the following account of a curious new invention: "An apparatus for giving an alarm in case of the presence of carbonic oxide or coal gas in a room, it is reported, has recently been invented by a Prussian. It consists of a galvanic battery with a bell and a glass tube filled with liquid chloride of palladium. This metallic salt is extremely sensitive to the presence of carbonic oxide gas. A small quantity of the gas will at once throw down some of the metal from the solution, and this precipitate collecting in the bottom of the tube, at once establishes a connection in the current of electricity, and the violent ringing of the bell will warn the sleeper of his danger."

Concerning the Siamese twins who have for so many years been the subject of medical discussion and conjecture, the Medical and Surgical Reporter has the following:

"The history of the Siamese twins, who have long been residents of North Carolina, is well known in this country. They many years ago visited this city, with the view of having an operation performed to sever the connection between them, but it was advised against. As old age advances upon them, they naturally feel greater solicitude on the subject, because in case of the death of one of them the life of the other may be involved. They are now in Europe seeking surgical advice. An English paper says: "Last week Chang and Eng waited on Professor Syme, at the University, for this purpose. After a careful examination, Professor Syme was strongly of the opinion that such an operation would prove highly dangerous to their lives, and accordingly advised that the operation should not be performed. Sir James Y. Simpson, Bart, also entertained the same view, and the opinions of the two learned Professors may, we think, be taken as conclusive evidence on this hitherto debated point. It is intended, however, to take the opinion of a Paris Professor on the subject." If one of them should die, and the other survive, an operation with the knife or écraseur would of necessity have to be resorted to, and the result could be no cause of reproach to the operator, as it would be the only chance of saving the life of the survivor."

The result would solve the problem, whether the operation might or might not have been safely performed years ago. We trust that when this trying time arrives, it will be their good fortune to fall into the hands of an intelligent practitioner."

Yours truly,

JAMES B. BURNET, M. D.

THE following description of a very interesting case is extracted from a letter of Dr. H. W. Callen, of Gilmer, Texas:

"In June last, I was called in haste by a messenger from one of our physicians, to aid him in a case of obstetrics, some five miles north of Gilmer. Found the woman, a negress, with the lower extremities (as high as the hips) of a fœtus apparently at say four months, *protruding from the anus—perineum all right*; fœtus not only dead, but very offensive; woman apparently pretty well exhausted. Tried to remove the fœtus by traction, etc., but could not obtain sufficient effect from chloroform. Patient could not bear introducing more than one finger into the rectum, and that gave her intolerable pain. One of the thigh bones came away while using traction. Found, on introducing the finger, sharp points of vertebra, pelvis, etc. Believing patient would die, if not from exhaustion and absorption of poisonous gas, from the lesion necessary to the then existing state of matters, Dr. R. and myself agreed to leave a few doses of opium to quiet the nervous excitement; but strange to tell, the opium quieted and relieved her to such an extent that by next day she appeared very much better. In a day or two more, another physician was called to see the *strange case*—and finding the bowel so he could introduce his fingers without giving much pain, he removed the greater part of the fœtus in separate bones. The woman made a good recovery, and in September last passed some two or three bones from the rectum; there may yet remain some more. However, she was still fully able to do her work in attending to the duties of a house servant. She had some two or three children living."

CLINICAL RECORD.

COLLATED BY S. S. HERRICK, M. D.

Five Cases of Disease of the Eye, selected from the Eye Clinic ; Ward No. 10, Charity Hospital, in charge of DR. W. S. MITCHELL, Prof. of Anatomy and Ophthalmic and Aural Surgery, New Orleans School of Medicine.

CASE I.—Spontaneous Displacement and Reduction of the Crystalline Lens, Left Eye.

JAMES K.—w, aged forty-six, an Irishman by birth, was admitted into the ward, December 1, 1868, with granular ophthalmia of both eyes, the granulations being of the flabby-strawberry variety. General condition anaemic. The condition of the eyes had existed, from his statement, for about six months. He was at once placed upon the course of treatment usually followed in the Ward in such cases—viz :

R.	Hydrarg Bi-Chlor.....	gr. i.
	Tinct. Gentian Co.....	$\frac{1}{2}$ vi.
	M. S. Take Tablespoonful three times daily.	

The palpebral conjunctiva to be every day, alternately, touched with a ten grain solution of nitrate of silver and scarified. The following collyrium to be used by the patient twice daily :

R.	Cupri. Sulph,.....	gr. i.
	Vini. Opii	$\frac{1}{2}$ ss.
	Aq. Distil.....	$\frac{1}{2}$ i. M.

The case progressed favorably without any untoward symptoms until the 21st December, when on my morning visit I was informed by the patient that about twelve o'clock the night before he had been awakened by a sudden, sharp and severe pain in the left eye (to use the patient's expression) as if a dull knife was being plunged through its middle. This pain at the time of seeing him was still intense, and had so persisted through the balance of the night to such an extent as to prevent sleep. Upon opening the eye for the purpose of examination, at first, beyond evidences of a severe general inflammation, nothing unusual was noticed, save that the pupil was very peculiarly misshaped ; it could not be called dilated, and as yet atropine had not been used nor had any means been resorted to, to produce dilatation. The pupillary aperture was oval in shape with its longer diameter vertical, the shorter or horizontal diameter being scarcely a line in width. The power of vision was almost if not entirely lost. This condition of affairs caused me to examine into the case more carefully ; and upon using oblique light with a lens of six inch focus, the true nature of the case became at once evident, and *displacement of the*

lens was diagnosed—and that as yet the capsule was unruptured and in connection with the Zonula was presumed from the transparency of the lens and its peculiar position, being tilted as it were upon its vertical diameter; and only one half protruding into the anterior chamber, and also from the fact of its being held motionless in its new position.

Some doubt existing in my mind, on account of the irregularly dilated condition of the pupil, the intense state of inflammation etc., of the propriety of operative interference, it was determined to postpone an operation; and in the mean time place the patient on some palliative treatment. The following prescriptions were therefore ordered:

R Atropia.....gr. ij
Aq. Dist.ʒi.
M. S. Drop freely in left eye.

R Calomel.....gr. x.
Pulv. Opii.....gr. v.
M. flat Ch. No. x. S. One every two hours.

Also,

ʒi Morph. Sulph.....gr. ij.
Fiat Ch. No. vi. S. One every hour until relieved from pain.

Dec. 22.—The eye is somewhat less inflamed, pain much relieved, patient has slept well during past night. The pupil of the eye is now fully and regularly dilated, but the lens still retains its vertical position, is immovable and transparent. Can now distinguish outlines of large objects. Photophobia and lachrymation still present, with also double vision.

Dec. 24.—On entering the ward this morning, I was informed by the patient that his sight had returned, and that the pain had almost as suddenly ceased the night before as it had commenced.

Observation now elicited the fact, no instance of which (that I am aware of) has ever been recorded, of spontaneous reduction of the lens after its spontaneous displacement; and it is to call attention to this peculiar and undoubtedly very rare occurrence that this case is reported, as it may aid in throwing some light on the philosophy of lenticular displacements. It has now been nearly two months and a half since the occurrence of the displacement and as yet there has been no return of it. Vision is perfectly normal—so far as the granular condition is concerned, there has been a slow but gradual improvement. It would probably be well in this connection to anticipate a question which might naturally present itself in the minds of some of the readers of this article, whether the above might not have been a case of displacement of the lens, *followed by absorption* instead of *reduction*; a question which I would unhesitatingly answer in the negative, and consider it so established by the following conditions: In the first place, the position of the lens and its immobility prove that it was not only still enclosed in its capsule, but that the capsule itself still retained its connections with the Zone of Zinn

(suspensory ligament). 2ndly. The lens was *wholly* visible the day before its disappearance from the anterior chamber, leaving only twenty-four hours for the process of absorption; a period of time quite inadequate. In the 3d place the existence, this day (March 15th) more than two months after reduction, of normal vision and the absence of a trembling iris both give the negative to the supposition that absorption had taken place. If it is admitted that it was not absorption, but reduction, how are we to explain the phenomenon? Spontaneous displacement of the lens into the anterior chamber, either enclosed in its capsule or projected through that membrane, though but lately recognized, is already well established; for information on the subject the reader is referred to the Arch., Gen. de Med., Paris 1861, vol. 1.) We are called upon to account only for the reduction of a lens once displaced; that it should have resumed its normal position in a still transparent condition does not seem at all wonderful if we admit the possibility of displacement while yet within its capsule, as absorption of the lens seems to depend upon its actual contact with the aqueous humors of the eye, a condition only obtained by rupture of the capsule. As the mutual actions of the parts surrounding the lens, in producing those various changes necessary to perfect the eye as a dioptric instrument are at present a matter of no little controversy, and as it is upon these *very changes* that any theory to account for the reduction, would be based, it does not seem to be amiss to cite such authorities on the subject as may be at hand;—but before doing this, however, let me call attention to the fact, that the lens is enclosed in a homogenous membrane called the capsule, divided for convenience into anterior and posterior; the anterior portion of the capsule, or anterior capsule, as it is usually called, is closely connected with the Zone of Zinn, (Zonula of Zinn, suspensory ligament), which is the anterior termination of the hyaloid membrane, (Metz on the Eye) and through it connection with the other tissues of the eye is established, at the same time that it retains the lens "*in situ*."

R. Schirmir (*Griefsw. Med. Beitr.*, 1.77) *Ophthal Review*, vol. 1, pp. 69,—referring to a case of displacement under his care, says:—Among the various explanations which have been advanced, the supposition of a traumatic case has now been generally abandoned, and the rest are far from proved. In the case cited, displacement may be fairly attributed to arrest of growth in the lens, for if it does not increase proportionally to the surrounding parts, the Zonula of Zinn, will become stretched, and ultimately torn”;—but the author acknowledges his inability to account for all cases by this supposition, and at the same time notices a case of an albino, in whom the lens was unnaturally small without dislocation. This last case has a particular bearing upon the case now under consideration, as it proves very conclusively when taken with the first case of Dr. S., that the Zonula of Zinn is

susceptible of considerable stretching without laceration—this elasticity of the hyaloid will be again referred to in presenting a theory to account for spontaneous reduction of the lens.

D. Wicker, (*Klin. Monatsbl. f. Augenh.*, 1.114 *Oph. Review*, 1.78.) Cites a case of a girl of eighteen, who came to him for treatment with extreme myopia—both lenses were dislocated upwards and slightly outwards; the lower half of the iris was tremulous. The girl read No. 1 Jager from one to two and a half inches, and No. 20 only up to a foot. The lens was still transparent. The case was relieved by iridescis (displacement of pupil). It should be mentioned that in this case the patient also had double vision, and that on ophthalmoscopic examination two optic discs were seen in both eyes.

H. Wilson, (*Dublin Quarterly*, XI. 72,) relates a case of lateral dislocation of transparent lens, in which were seen two discs with the ophthalmoscope.

C. Pagenstecher, (*Klin. Monatsbl. fur. Augenh.*, 1865, pp., 1-71, *Ophthal. Review* vol. 2, 191.) Divides his cases of displacement of the lens, whether opaque or transparent, into two classes, those in which the normal connections of the capsule with the zonula and hyaloid fossa were more or less completely ruptured, and into those in which there was a separation of continuity in the capsule itself, the lens in the last class being invariably opaque, and the cause of displacement traumatic. * * * The author remarks that "the so-called" spontaneous luxation of the lens is due either to simple atrophy or atrophy after inflammation of the surrounding tissues.

R. Schirmer; spontaneous luxation of the lens into the anterior chamber. (*Griefsur, Med. Beitr.*, iii, *Ophthalmic Review*, London, vol. 2, 214.) "A man, aged thirty-eight, was admitted on 1st June, 1861; the left lens was opaque and dislocated into the anterior chamber; the iris was atrophied, the pupil dilated, fixed and irregular. Sclerectasia anterior of the size of a pea just above the upper edge of the cornea; globe soft, no acute inflammation; no pain; vision entirely lost.

The patient stated that the eye had never been injured; during the past year it had been free from pain and redness. In the right eye there was marked iridodonesis, as a consequence of a subluxation of the transparent lens. He again appeared on the 20th May, 1863, the left eye had become quite sunken; in the right the lens was transparent, though dislocated forwards, so that the outer part of the iris was covered by it whilst the inner portion was wedged between it and the cornea. The conjunctiva was somewhat congested, but there was not much pain. He read Sn. No. 3; there was extreme myopia. He stated that he had been in this condition for three days. In this case the lens was successfully extracted.

Dr. Henry W. Williams, in *Boston Med. Jour.*, Vol. I, xxiv. No. 4. p.p. 73., reports a case of spontaneous dislocation of the lens in

both eyes. The author says: "On the 19th January, 1866, I saw a man about 40 years of age, who gave the following account of his case: He had always, since his remembrance, had imperfect vision in the left eye, and had at times, observed in its anterior chamber what seemed like a drop of olive oil, which would again disappear. From his account of his symptoms there can be no doubt that this was the displaced crystalline. About a year since he began to have pain in and around this eye with photophobia and lacrymation, accompanied by injection of the vessels of the globe, after some time a cloudy appearance was observed in the field of the pupil, and vision was gradually lost. In the right eye also, the sight became less perfect, and he was annoyed by double images in this eye, one of them being more clearly defined than the other. * * * * * * * * * The right eye on examination showed a dislocation of the crystalline towards the inner canthus to an extent equal to half its diameter. Slight cloudiness was also beginning in the lens; with much difficulty he could read large print when brought very near his eye. A narrow crescent of clear shape could be seen at the outer margin of the pupil and through this space he could see much better with a cataract glass. * * * * * * * * * The lens was successfully extracted.

Many more cases could be cited but it is unnecessary to impose farther on the patience of the reader. I shall simply refer those, who are desirous of more deeply investigating the subject, to the various published articles of Von Graefe, and to a very excellent work on the eye, (lately published,) by Stellwag.

So far as we can derive any conclusions from the cases cited above and from the latest works published on the subject, but two causes have as yet been given which account in a tolerably satisfactory manner, for dislocation of the lens into the anterior chamber, or its displacement in any way. These are first atrophy of the lens, this atrophy being either the natural result of old age, (senile atrophy) or existing as one of the sequelæ of inflammatory action. Secondly, arrest of development, as advanced by Von Graefe, partly on the ground that by far the greatest number of these cases are congenital.

Although it is far from my intention to deny the justice of these conclusions under certain circumstances, still it is utterly impossible by them to account for the reduction (or even the displacement of the lens in the case under consideration,) as it certainly was neither an example of arrest of development nor of atrophy.

We have satisfied ourselves at least of one fact, (derived principally from the report of Dr. Schirmir of the Albino, in whom the lens was still retained "in situ," although unnaturally small) that the Zonula of Zinn possesses a certain amount of elasticity, or at least an ability to yield to tension without rupture. So far as the theory I propose to advance is concerned this concession is of the utmost importance.

The patient enters the ward, with health broken down, after long exposure to malarial influences, anaemic, and with relaxed tissues, those of the eye being more so than the rest on account of the super-addition of a long continued conjunctival inflammation. As one of the tissues of the eye the Zone of Zinn became of course involved and the lenticular body was retained in its position only by the iris, the pupil not as yet being sufficiently dilated to admit of its exit.

Presuming this to have been the condition of the eye at the time of the accident only a slight force and a dilated pupil were required for its occurrence. Lying upon the side of the affected eye, asleep, the patient gives a sudden start; supplying the force, sleep had already dilated to some extent the pupil, and the lens with its capsule tilts over on its vertical axis and a portion passes through the pupillary aperture. It is very probable that the lenticular body might now have been returned to its normal position, had it not been that so soon as a portion of it impinged upon the pupillary margin of the iris, the presence of a foreign body (and we are justified in so considering the lens under such circumstances,) caused the pupil to contract and the lens was thus retained as I saw it on the following morning. The final reduction was accomplished almost if not entirely through the action of the atropia, acting here in a double capacity, first increasing the tension of the Zone through its action on the ciliary muscle, secondly dilating the pupil.

CASE II.—*Extirpation of left eye for sympathetic ophthalmia of the right.*

Philip Six, aged 26; in Februray 1863, had a severe attack in the left eye of what I conceive from the description to have been iritis, the pain gradually increased for three weeks, at the end of which time power of vision in the left eye was entirely lost. The right remained perfectly normal until October last, when for the first time he noticed specks and a glimmering before it; in a few days he experienced slight wandering pains over the right supra-orbital region; at first they were felt with several days intervening between the paroxysms, but the intervals decreased as the intensity of the pain increased until at present the pain is both constant and severe. The pain in the left eye had been almost uninteruptedly present, but varying much in intensity from the first attack to the present time. Upon examination, the left eye presents symptoms of long continued inflammation of all its tissues, (panophthalmitis,) iris discolored, pupil contracted, lens opaque and calcareous, sclerotic attenuated, vitreous humor disorganized, as evinced by the soft (putty like) feel of the eye, and the globe mis-shapen, the lateral diameter being greater than the antero-posterior. The right eye presents a dull but not discolored iris, pupil regular but iris responds slowly and incompletely to the action of the light; neither the conjunctiva or sclerotic injected to any considerable degree. Vision exists only

so far as the ability to recognize the outlines of very large objects is concerned, in fact useless for the purposes of locomotion.

Ophthalmoscopic examination elicited the following appearances: Vitreous humor, but slightly turbid, not so much as to prevent a thorough exploration of the deeper seated structures. Retina of a deeper red than natural, veins engorged, arteries constricted, optic disc enlarged, swollen, irregularly defined and of a dirty yellow color. Upon consultation with Drs. Cornelius Beard, who had very kindly placed the case at my disposal for clinical purposes, the case was diagnosed one of sympathetic ophthalmia, and it was determined that the only possible chance of relief was in enucleation of the left eye. This operation was performed on the 28th of February; the patient was placed under the influence of chloroform and with the assistance of Dr. Tobin and Stackhouse, and the ward students, the usual operation of removing the globe alone was performed; the conjunctiva being divided upon the sclerotic about a line from the corneal margin, and the muscles divided at their attachment to the sclerotic, the optic nerve, by a pair of long curved scissors, was cut a slight distance beyond its entrance into the globe. As the divided ends of the muscles unite in the centre of the orbit by means of cicatricial tissues, thus giving not only a good sized stump but a moveable one, the procedure adopted in this case is much to be preferred, in cases which will admit of it, (and under this head may be enumerated almost every disease requiring enucleation, except malignant cases,) to the old method of excising everything in the orbital cavity. The only objection which could possibly be urged against it in preference to the old method is that it requires more time and perhaps a little more careful dissection. The amputated eye was examined after its removal and found to be entirely disorganized, calcareous matter having taken the place entirely of the lens and almost so of the choroid, the optic papilla was at least four times its normal size, degenerated into a puffed up fatty mass of a dirty brown color.

The stump in this case healed very kindly, the patient being only confined to bed for two days, and the improvement in the eye (the right) has been far beyond our most sanguine expectations.

March 11. The patient leaves for his home on Red River today. The stump of the left eye has entirely healed, suppuration has ceased, it is of good size and very moveable. Vision has improved so much in the right eye as to enable the patient to walk the streets alone, and the pain has entirely disappeared.

It would not be amiss, perhaps, before closing the report of this case, to call attention to an operation for sympathetic ophthalmia, which introduced a few years since by Von Graefe, has met with much favor from the European oculists, that is Neurotomy or division of the ciliary nerves, at the most tender portion of the eye. Five successful cases have been reported, three by

Dr. E. Meyer, of Paris, upon the suggestion of Von Graefe; two by Prof. Secondi of Genoa; and one by J. Z. Laurence, M. B. F. R. C. S., London. Dr. Laurence thus describes his operation. "By means of a probe it was found that the most tender part of the ciliary region was situated downwards and outwards. * * * * On the 22nd of June I made an incision of about half an inch, along the tender part of the ciliary region of the primarily injured eye, a little vitreous escaped. August 3rd, discharged from hospital perfectly cured." This operation is based upon the supposition that sympathetic ophthalmia is propagated cyclitis or inflammation of the ciliary bodies; and coming to us as it does endorsed by such high authority, is certainly deserving of a trial. And the more so as it places in our hands the means of relieving a very insidious and distressing disease, without having recourse to the bloody and disgusting operation of enucleation; perhaps not its least recommendation is the fact that the other operations are so dreaded by patients generally that the time when relief might be given is allowed to pass by unheeded.

✓ *Three cases of division of Supra orbital nerves, both eyes.*

CASE III.—J. C—e, second mate on steamboat, about 37 years of age, had been under treatment for some eight months previous to August 20th, 1868, for granular ophthalmia, which followed a prolonged attack of supra-orbital neuralgia. The patient has been steamboating for the past two or three years on the Red and Ouachita Rivers, and has had frequent and persistent attacks of chills and fever; since the first paroxysm of neuralgia, about a year ago has had only one or two chills, and has been under my treatment for the past six months, and although apparently, at times recovering, continual relapses have taken place and the disease has resisted all treatment. During the past months relapses have been more frequent and the neuralgic pain almost unbearable. The cornea is now in a condition of extreme pannus and vision for all practicable purposes lost. Fully convinced that the division of the supra-orbital nerve would be the only chance of relief, and in accordance with a theory advanced by me in the August (1867)¹ No. Southern Journal Med. Sciences, upon the relations between supra-orbital neuralgia and granulations, both the supra-orbital and trochlear branches of the frontal nerve, were divided on both sides. On the 20th August 1868, the relief from the neuralgia was instantaneous and with the usual treatment for granulation used by me in these cases, viz., applications daily, of from five to twenty grains of sol. of nitrate of silver, the eyes improved rapidly and in three weeks from the time of the operation he was enabled to resume his duties on the river.

This patient was last seen by me on the 27th of February, at that time his recovery was in every way complete, all that remained of former disease being a slight opacity of one cornea.

CASE IV.—J. O. D—, aged 47, an Irishman, was operated upon for granular ophthalmia, and supra-orbital neuralgia, February 1st, 1867, by dividing both supra-orbital nerves. The case had been under my treatment without any relief for three months (it was one of some sixteen months duration.) The relief from pain has been as marked in this case as in No. III., but the improvement in the condition of the eyes has not been so rapid, yet they seem now to progress favorably under proper treatment. A few days after the operation a very severe attack of erysipelas supervened and lasted eight days.

CASE V.—P. K—, aged 35, an Irishman, suffering with severe supra-orbital neuralgia, with excessive lachrymation and photophobia but with no other symptoms of an inflammatory process in the eyes, save a slight congestion, entered the ward on the 23d of February. The operation on Case 1, viz: division of both supra-orbital and trochlear nerves was repeated on this case at the date of entry. No untoward symptoms presented themselves during process of recovery from the operation. The pain was entirely relieved and the condition of the eyes much benefited, but a sufficient time has not elapsed to determine with certainty the result so far as the eyes are concerned.

These last three cases are presented in as concise and brief a manner as possible, in as much as they are intended as addenda to the article before referred to, on the relations of supra-orbital neuralgia and granulations. At the time of writing this article I had not had an opportunity of thoroughly testing by division of the nerve the relationship between the two as to cause and effect and was forced to adopt the view, merely as a theory, that in many cases the neuralgia precedes and is the prime cause of the ocular disease.

A Monstrosity of Sex. The Case of JOHN G. ALLEN. By L. E. NAGLE, M. D.

LATE in the year 1866, the person,—John G. Allen, was arrested by the police, in the city of New Orleans, on a charge of being a female. She was masquerading in male apparel, and, after a casual examination, was ordered to dress as a female, and was then discharged from custody. In this garb, I found the person acting in the capacity of a servant, and answering to the name of Katie. From the person I learned that the parents had decided at his birth that he was a boy, and had treated him as such; and that he had always been recognized as a boy.

This person was nineteen years old in January, 1867. The general appearance is very feminine. The upper lip, chin and cheeks do not present any hirsute evidences. The face, hair and general features are those of a scrofulous female. The neck

and shoulders are delicate, and have outlines of conformation similar to the appearance of a woman. The breasts are like those of a female child of twelve years of age. The nipples are very small, and have very little areola. The outlines of the abdomen and the swell of the hips, thighs and beautifully modelled legs, tapering delicately and ending with small, well-formed feet, all indicate female peculiarities. The shrinking sensitiveness, manners and voice are also very feminine. These, however, are the same that would be seen in a person who had been castrated in childhood.

I discovered in this person but one organ of sexuality. This is a penis, which is about an inch and a half long and a half inch in diameter. There are a miniature glans penis, faintly outlined, and an ordinary sized meatus, occupying their correct anatomical positions. The prepuce consists of numerous small, corrugated folds, and constantly covers the glans, thus presenting an entirely distinct form from a clitoris. A urethra passes from the meatus in nearly the proper course as found in males, and the orifice and sphincter are controlled in the manner usual to males. The base of the penis is in the natural situation. There is not the slightest trace of scrotum, testicles and prostate gland. There are no evidences of an attempt at labia. The perineum is rather full, but the *raphe* does not exhibit any appearance, that nature ever attempted to establish a vaginal aperture. A male catheter was introduced through the urethra with much ease. The finger was introduced into the rectum, and the exploration assisted by the point of the catheter did not procure any evidence of a trace of a vaginal canal. The examination discovered to me rather a less quantity of interstitial tissue than is usually found in either sex. The exploration did not discover the slightest evidence of folds of vagina or a uterus.

The pulse is strong and more delicately formed than we usually find in males. The mons-veneris is covered with a small quantity of hair, which is of very fine texture and completely surrounds the base of the penis. The general admeasurement of the pelvis is less than the average in females, though the general appearance of the pelvic formation is very feminine, in all its delicate outlines, contour and structure.

This person states that he sometimes has indefinable copulative desires, which doubtless arise from a mental excitation. He thinks they are rather stronger in inclination for communication with males. During a long examination, in which much manipulation and friction necessarily occurred, we did not detect any signs of passion or sexual excitement in the person. He also informed us that he seeks the society and protection of men, and that his disposition is to associate with males, rather than with the opposite sex.

There has never been any secretion from the penis or any other organ of the body, which would indicate vicarious menstruation

or seminal evacuation. The person is of hereditary scrofulous habit. Ulcers occasionally appear on the neck, shins, in the nose and other parts of the body. Epistaxis occurs occasionally, but is not periodical or traceable to any menstrual or unusual cause apart from sensitive membranous structure, consequent on this scrofulous taint.

From all these data, I concluded that this person is merely a natural eunuch. Nature forgot to add genitals to him, and he was thus emasculated by default.

In January, 1867 I took the person before the medical class of the University of Louisiana and New Orleans School of Medicine, where he was examined by Surgeon Warren Stone, Professor S. M. Bemiss, Surgeon Campbell, and others; and the same particulars I have described were elicited and pronounced. We immediately certified to the foregoing condition of the case, and declared it to be our conviction that he was entitled to wear, and should be permitted to wear, the habiliment usual to males. In accordance with the particulars therein certified to, and after a farther personal examination held before Mayor Monroe, his honor gave John G. Allen a certificate to the effect that he was a male person, ordered him to wear the garments of his sex, and guaranteed protection against arrest and molestation on this account.

Quinine versus Hens: By GEORGE COLMER, M. D., Springfield,
Livingston Parish, La.

IT is sometimes interesting, even if not useful—to know the powers of medicine, not only on human beings, but also on other animals; and not only the powers of medicine, but also their want of power.

Apropos to this subject I here give the case of a *hen* that lately swallowed an enormous dose of quinine, with what effect will be seen in the sequel. The facts are these:—

Some time last year, and whilst in attendance on one of her children, I gave a lady of this neighborhood, a weighed quantity of sixty grains of quinine (the ordinary sulphate) with directions to make it herself, with the addition of some wheaten flour into pills, as she had often done before. The number of pills made was twenty.

The pills were placed in a saucer on a table, and one of them was taken out and given to the sick child, as it lay in bed in one corner of the room. Presently the lady turned round, when there was on the table, a nursing pet *hen* busily engaged in picking up the pills, the last one of which was swallowed before she could be driven off. This bird had therefore swallowed *fifty-seven grains* of quinine.

That the quinine was good, I know from the fact that it was

part of a lot of several pounds in bulk, which I had bought during the late war, and of which I had then used nearly the whole, without having discovered in it any lack of the ordinary power.

I do not know whether *hens* ever *vomit* or not; *vultures* certainly discharge at times, and perhaps hens do so also; but in this case, certain it is, that no such thing occurred immediately, nor even subsequently that any one could discover.

For a while the poor bird appeared somewhat unsteady in her movements, and reeled as if somewhat intoxicated; but in a few hours she was again calling her chickens, and performing her maternal labors pretty much as before.

A month later she was still "alive," and is so yet, for aught I know to the contrary.

✓ *A Case of Accidental Poisoning by Sulphate of Morphia: Reported by J. J. LYONS, M. D.*

ON Saturday, October the 31st, I was called to see S. L—, a little girl five years old. Her father stated that during the morning she seemed to be enjoying her accustomed health and vivacity. At 12 o'clock he had given her three or four grains of sulphate of quinine to prevent the return of an intermittent, from which she had suffered the previous week. Strange symptoms having soon afterwards supervened, my attention was called to the case. I saw her at 3 o'clock, three hours after the administration of the medicine. The following symptoms were present: Pulse full and slightly excited; pupils contracted to the size of a head of a pin; stupor was fast approaching but was not complete, occasionally she would wake and fret; severe itching of the skin.

The paper which contained the medicine had been thrown out in the yard; I went out and fortunately found it. To my utter horror, I found written upon it, in rather dim characters: "five grains sulph. morph." Having at hand some powdered alum, I immediately gave a teaspoonful and sent to the nearest drug store for some reliable tinct. belladonna.

Being obliged to leave for a short time, I directed the patient to be kept awake, if possible, and the alum to be repeated every fifteen minutes, and twenty drops of the belladonna to be given every half hour.

I returned within an hour. To my great satisfaction, I learned that after having taken six teaspoonsful of the alum, and sixty drops of the belladonna, the patient had vomited freely. After this I cast aside everything else and risked my all upon the belladonna. I remained with my patient all night and administered the medicine with my own hands.

We kept her awake by putting her down and compelling her to walk about the room.

I observed no effect of the belladonna on the pupils until about 3 o'clock A. M., I immediately, co-incident with the partial dilation of the pupils, found that when allowed to sleep for a few minutes she was a great deal more easily awaked. Her countenance began to assume its natural appearance, and respiration became normal.

At 4 o'clock I allowed her to be put to bed. She slept sweetly until 6. On examination I found her bladder largely distended. She was easily awaked, and on being placed upon the chamber, she passed half-a-pint of natural looking urine. She had passed none since taking the medicine at 12 o'clock the day before. Her pupils were largely dilated.

Not an untoward symptom manifested itself afterwards. She exhibited her usual sprightliness during the day, and took her meals with decided relish.

It may seem strange to some that I did not increase the dose of belladonna when I found it so slow in making an impression upon the pupil.

I will simply state that this was my first experience with it as an antidote to the poisonous effects of opium, and I felt some timidity; but if I had another case to treat I should not feel justifiable in giving it in larger doses, unless I found the stupor constantly becoming more and more profound, which was not the case in the present instance.

CHRONICLE OF MEDICAL SCIENCE.

REVIEW OF FRENCH MEDICAL LITERATURE.

BY DR. J. H. WIENDAHL, OF NEW ORLEANS.

The Efficacy of Arsenic in Phthisis, by M. MONTARD MARTIN.

Read before the Imp. Acad. of Medicine, Paris; November 3rd, 1868. By M. MERARD.

M. Merard, at the request of the committee, of which he and M. Louis and M. Chauffard were members, read the report of a treatise by M. Montard Martin, entitled, "The value of arsenic in pulmonary phthisis,"

The reporter first drew attention to the fact, that the medicinal value of arsenic has been recognized for centuries, and that many eminent physicians, of late years, have formally recognized its power. But all the articles heretofore published in explanation of the power and effects of arsenic fail to give a strict account of

its therapeutical action in phthisis, either because the author's observations have a bearing upon some other disease, or else because the clinical facts are wanting in details and necessary precision.

M. Merard then added that such a reproach could not be attached to the treatise then under consideration. The author, an experienced observer, and apt diagnostician, is careful to furnish with each case, positive indications, by which we can recognize, not only the nature of the disease, but the degree to which it has attained and the peculiar form which it assumes. M. Martin has perfectly understood, that in order to convince his readers and cause them to appreciate the power of arsenic it was necessary to simplify the therapeutical problem by excluding all other curative agents.

M. Merard then examined the conclusion to which M. Martin has been led through his researches, both in private and hospital practice. Almost all of the patients experienced a great relief after a few days treatment. Their appetite was restored, their energies awakened, their skin became clearer, and their eyes brighter, and at the end of three weeks or a month they began to fatten.

The Reporter also cited a few instances from the treatise of M. Martin, which demonstrated the efficacy of arsenic in the general and local phenomena of pulmonary phthisis. The happy influence of the medicine reveals itself particularly in cases of phthisis not attended with active fever or grave troubles of the digestion. When febrile action is intense, continued or remitted, accompanied by profuse perspiration, vomiting and diarrhoea, and when tubercularisation is acute, the medicine acts more slowly and is less lasting in its effects.

Arsenic affects some persons peculiarly and it should then be discontinued. In some unfavorable cases reaction takes place but slowly, and finally the fever accompanied by loss of appetite and wasting away returns and the patient dies in the marasmic state which the arsenic only delayed a few months.

M. Montard Martin records two very unfavorable cases which recovered. The author states that he was more successful in his private practice than with his hospital patients; but he thinks this was owing to the better nourishment of the former.

M. Merard remarked that the same results had been arrived at by other physicians of other countries and at different times, among whom were Messieurs Troussseau, Pidoux, Sandras, Massart, Millet, Wahn, Cahan, Isirard, Baula, &c. M. Merard had also recognized the benefit derived from the remedy both in private and hospital practice.

M. Merard then explained the action of arsenic. One of the first appreciable phenomena is the return of appetite; whether it be a result of the action of the remedy upon the intestines or mucous coats of the stomach, by which the secretion and vital action are notably increased, or whether it excites a more general tonic

and neurosthenic action, in which the digestive function is the first to participate, it is hard to say. Arsenic seems to exercise another action not less important than the first, that of moderating the oxydation of the tissues as a safeguard against denutrition, as shown in the experiments of Brettschneider, Schmitt, and Sturtzwage, as well as in the more recent experience of M. Loliot, an Interne in one of the Paris hospitals. The experiments of M. Loliot have established the fact that ten miligammes (three-twentieths of a grain) of arsenious acid administered daily produced a lowering of the temperature of the skin, as well as a remarkable diminution in the quantity of urea excreted.

The Reporter asks whether arsenic exercises a direct action upon the luugs? He is inclined to the belief that it does, as the respiratory mucous membrane is one of the channels for elimination of the medicine. It is of an acknowledged efficacy in certain affections of the pulmonary organs, (chronic bronchitis and asthma,) and in the different countries of Styria, lower Austria and Tyrol, the peasants make frequent use of arsenic to facilitate respiration, or as they express it, to render themselves more "volatile" in the laborious ascent of mountains.

In conclusion M. Martin indicates in what doses and in what manner the remedy should be applied in phthisis.

Arsenious acid which is preferred by M. Montard Martin and M. Merard is given in small pills or granules of one milligramme, (granules of dioxide.) Seven or eight of these granules are given at first, and are then rapidly increased to ten or fifteen milligrammes, and *very seldom* to as much as two centigrammes. M. Merard affirms that with the precaution of making the doses very small and never giving more than two milligrammes at a time, and by always giving them before meals no accident ever occurs. Occasionally one may be compelled to suspend the treatment for a few days, owing to some other passing disorder, such as diarrhoea, vomiting or gastric pain. As to forms in which the arsenious acid should be prescribed you may use either pills or granules, a solution in doses equally small, or mineral waters which contain arsenic.

Whatever may be the preparation or form employed, there is one precaution which should always be taken, to discontinue its use occasionally. M. Merard remarked in conclusion that the treatise of M. Montard Martin will greatly contribute to establish the fact that arsenic is a perfectly safe medicine when properly administered and is at the same time of incontestable efficacy. The meeting was closed by proposing an address of thanks to the author, and sending the memoir to a committee of publication.—*L'Union Medicale, Nov. 1868.*

Two Cases of Vaginismus; the First Cured by Simple Dilatation with Gentian Root; the Second by Bromide of Potassium.

M. ROBERT LATOUR relates that the daughter of a "confrere," had been married for two years, and experienced such pain in the conjugal act, that although she and her husband were both anxious to have children, they were forced to renounce the hope. Quite a number of means, such as prepared sponges, belladonna tents, prolonged baths, emollient poultices etc., had each in turn been tried for a considerable time; all these agents proving inefficient she had been advised to submit to a surgical operation. But here opinions differed, some proposed forcible dilation as is usual for contractions of the rectal sphincter; others proposed several or more incisions.

None of the operations being decisive in point of success, M. Robert Latour, was finally called in and implored to do his utmost in devising some means of relief without having recourse to painful or cutting operations. Remembering the happy results Professor Nelaton had derived from gentian root in the dilatation of the fistulous tract left in the wound of General Garibaldi, and conceiving a fair hope of success from the expansile nature of the root when exposed to moisture, he introduced a cylinder of about one-thirteenth of an inch in diameter, it being all that the vagina could admit, but this diameter was increased progressively each day, and a week sufficed to permit, without violence, of the introduction of the index finger. M. Latour then advised the husband to accomplish the rest, and the result was immediate pregnancy. The lady has lately been delivered of the second child.

Vaginismus is oftentimes a form of vulvar hyperesthesia with displacement or deviation of seat, and it is for this reason that before having recourse to cutting or painful operations it would be advisable to try an anesthetic influence on the mucous membranes; a course of treatment, which at present has considerable reputation, and by the aid of which M. Racibroski has been equally successful with cases of vaginismus and dysmenorrhea.

This physician has lately published in a recent number of the "Gazette des Hopitaux," the case of a chamber-maid afflicted with dysmenorrhea complicated by vaginismus.

The catamenia being expected in a few days, M. Racibroski ordered thirty grains of the bromide of potassium to be taken daily by the patient until the appearance of the discharge, and to continue the same during its presence. The menstrual flow was free from pain, and between the periodical intermission the hyperesthesia was perceptibly lessened.

Bromide of potassium was resumed after eight days intermission, and continued until after the return and disappearance of the menses. On visiting the patient a few days later she informed him that she had missed the usual pains connected with the

menses as well as those she had formerly experienced during the interval between the periods.

Direct examination of the sexual organs left no doubt of the cure. The vaginal mucous membrane as well as the hymen had resumed their normal state; and they could be touched and pressed without giving pain. The patient has continued perfectly well for three months without causing any fear of a relapse. To confirm the cure M. Racibroski, prescribed small doses of iron by hydrogen, and the use of chalybeate waters, at meals roast beef and beefsteak, small doses of the wine of bark and cold water ablutions.—*Journal de Médecine et de Chirurgie, Janvier, 1869.*

On the Diuretic Action of Tannin.

M. DORMAY, on his way to China, in 1859, had aboard ship a case of typhoid fever accompanied by severe tympanitis, which persisted in spite of mild evacuants. Being acquainted with a formula used by Beaume for this peculiar complication, viz., the powder of oak-acorns (*quercus mices*.) and the syrup of fennel; not having the acorns he replaced them with tannin and prescribed the following :

R	Tannin.....	gr. iij, ss.
	Sulph. Ether.....	gtt. xxx.
	Sweetened water.....	ʒiv.

The tympanitis yielded to this remedy and he was surprised at the copious flow of limpid urine from one who had before urinated but seldom and with difficulty.

M. Dormay has since obtained the best result from the use of this prescription in diseases of the kidneys in persons of sedentary habits, and in spasmodyic paroxysms of nephritic colic, and also in affections of the bladder.

The action of this diuretic is mild, because it is indirect and operates by diminishing the other secretions. We are all acquainted with the action of tannin on profuse perspiration, and to consider it as a diuretic was but a step farther in appreciating its action; but yet it escaped observation. We employ uva ursi, the root of the strawberry and other agents whose action is due only to the tannin which they contain, and still we do not think of a drug which is so easily administered and so powerful as an indirect diuretic.—*Bouchardat.*

The seat of Strangulation in Crural Hernia, and the practical results springing therefrom.

In a recent work of Mr. Adophe Richard, on crural hernia, he

remarks that, "we all agree in recognizing as agents of strangulation, one of the openings of the fascia cribiformis, the superior orifice of the crural canal against the ligament of Gimbernat, or more seldom the neck of the sack."

In 1849 Louis Malgaigne, who had visited every museum and sought for hernias everywhere, and who had seen thrice as many as Astley Cooper, had never met with a single case of crural hernia strangulated by the neck of the sack. From thence he concluded, against the doctrine of Cooper, that if this mode of strangulation which he considered as constant in inguinal hernia had been met in crural hernia, it must have been quite exceptionally.

Malgaigne did not admit the theory of strangulation by the rings. The crural ring, said he, which is more than an inch in diameter, is too wide to ever be the cause of strangulation. This second mode was again in his experience but an exception which confirmed the rule, and he explained it in this manner: sometimes, he said, crural hernia extends through the whole crural ring, and comes out by the orifice of the internal saphena, strangulation is then due to this orifice; but more commonly, it descends but half way into this canal, and escapes by one of the openings of the fascia cribiformis.

Before giving the practical deductions of Malgaigne, we wish to notice a small treatise, which was published in the "*Journal de Médecine du Dauphiné et de Javire*," and in which, the author, Dr. Corcelet, has performed this year, what Malgaigne advised and practised thirty years ago.

Having one of those exceptional cases in which the strangulation existed at the superior opening of the crural funnel, Dr. Corcelet, after opening the sack, abstained from further use of the knife, through fear of wounding some of the arteries, and attempted the dilation of the constricted ring by means of the finger, which he succeeded in doing with considerable difficulty, and, this being affected, the hernia, which consisted of a dark epiploic mass, was pushed back above the ligament of Gimbernat.

Such was the practice of Malgaigne in crural hernia, wherever the strangulation existed. The superior orifice of the crural funnel being but a cellulo-fibrous opening, it sufficed, said he, to distend it without previously opening the sack, to produce immediate reduction of the hernia. The sack was only opened if the hernia was of three or four days standing and seemed wounded. If the hernia was of recent date, several attempts at taxis with or without chloroform were made. If the efforts were fruitless, Malgaigne desisted here; he exposed the sack by incising the skin and the cellular tissue, and in having the wound sponged out. This first step being accomplished, he grasped the sack at its neck, drew it out, and engaged between its pedicle and the fibrous ring a spatula which enabled him to distend the ring. During ten years Malgaigne performed no other operation, and entertaining no fear of wound-

ing the famous arterial circle of Scarpa, he truly transformed her-niotomy into an inoffensive operation, and available even to the least inexperienced operator.—*Journal de Médécine et de Chirurgie, December, 1868.*

A Simple and Easy Method of ascertaining Death.

THE Marquis d'Orches having offered a premium of twenty thousand francs, for the discovery of a practical method of ascertaining death, available even in the poorest hamlet, Dr. Carrière of St. Jean du Gard, presented the following which he states he has put in practice for the last forty years, namely, placing the hand with the fingers closely pressed one against the other, within an inch or more of a lamp or candle; if alive, we observe the hand to be transparent, of a rosy hue, and capillary circulation, or life in full play. If, on the contrary, we place the hand of a dead person in the same relation to light, we do not perceive any of the above phenomena; we see but a hand of marble, without circulation, without life.—*Journal de Médécine et de Chirurgie, Dec. 1868.*

On the relation existing between the pigmentary alteration of Pregnant Women, and the Suppression of Menstruation.

MANY opinions have been advanced on the etiology of this mask without arriving at a definite understanding. M. Cazenave considers it but an ephelides or a pigmentary alteration. M. Bazin, and many others attribute it to the presence of a parasite, the *microsporon furfur*. M. Nardy, less exclusive, considers that the mask of pregnant women, may, at times, be but an ephelides, and at others an affection of a parasitic nature. But, parasite or not, how is the formation of this pigmentary discoloration explained? How explain its disappearance after confinement, its presence after and during a lengthy period, or even its return without the woman having newly conceived? Those attributing it to the parasite, answer that the fungus, which had found conditions favorable to its development, disappears as soon as there is an absence of these conditions, and they add that the fungus returns with the return of favorable circumstances, etc. All this explains nothing, for what are the conditions? What is the morbid state to which we can attribute this mark when there exists no pregnancy? Which is the function whose disturbance or suspension predisposes to this chloasma, or at least coincides with it? M. Bayer observes, "that women have been seen, who for weeks had this affection, and in whom, at the menstrual period the tint became deeper set. Then these spots would return and disappear without perceptible desquamation. Several pathologists

have designated such spots by the name of chloasma gravidorum, and amennorrhœic chloasma, whose appearance coincided with the presence or suppression of menstruation." So far, we have established a fact founded on observation, viz., the coincidence of the spots with the disturbance or the suppression of the menstrua.

It is in confirmation of this fact, that M. V. Jeanin, a distinguished student of the hospitals of Lyons, has published a series of observations demonstrating the existence of an intimate relation between menstrual disturbances and this pathological coloration, improperly known under the name of mask of pregnant women, since it is found present in women who have never conceived, and even with virgin girls, and presenting the same characteristics as with mothers.

M. Jeanin cites in the first place a case of typical evolution of the mask in a pregnant woman who has a natural labor, who does not suckle her child, and who has a return of her menstrua about two months after her confinement. From the appearance of the catamenia, the spot on the forehead and on the face began rapidly to decline, and disappeared entirely four months after her confinement on the second return of her menses. M. Jeanin has observed eleven such cases in the hospitals of Lyons.

The second observation was that of a young woman, pregnant, having the mask, who did not nurse her child, and did not menstruate for six months after her confinement. During these six months, she was affected with the mask, which did not disappear until the return of her menstrua. Other women have presented analogous symptoms; with one, amennorrhœa and the mask lasted eleven months after confinement; with another only five months.

M. Jeanin then cites the case of a lady in whom the mask, which had disappeared after the return of the menses, returned in consequence of a suppression of them, (independent of a new pregnancy) and persisted till the return of the catamenial flow.

All the above cases were observed in women not suckling their offspring; but cases are related of those who nursed and who did not menstruate. In these the mask persisted, or faded but incompletely.

There is also noticed in some of the cases, the slow fading away of the mask after prolonged nursing, yet reproducing itself after wearing through the influence of persistent amennorrhœa. These observations being made during the state of gestation and after confinement, it was natural, outside of this double state, to enquire whether amenorrhœa alone could determine this pigmentary lesion, an enquiry answered by M. Jeanin, who has observed it in women who have never conceived, and even in girls in their virgin state.

The last observation of M. Jeanin is not less worthy of notice. It relates to a woman who had never conceived, in whom the

menses were normal, and who was affected with this mask, which disappeared almost entirely during the presence of the menstrua.

M. Jeanin has never met with the *microsporon furfur* in any of his patients; and is indifferent to its presence, the only fact which he was desirous of establishing being that the mask of pregnant women is often, if not always, dependent upon disorders or suppressions of the menstrual flow, i. e., of a physiological haemorrhage.—*Journal de Médecine et de Chirurgie*, Dec. 1868.

Puerperal Peritonitis ; Treated by Uterine Aspiration.

M. JULES GUERIN read a paper before the Medical Academy of Paris, in which he endeavors to establish the cure of puerperal peritonitis by the non-contraction of the womb in the newly confined; a condition which he had had occasion several times to notice in those in whom this affection had developed itself. He considered the action of air upon the uterus and upon its utero-placental surfaces as the immediate cause, and is established in the case of exposed wounds, when not protected from the action of the atmosphere.; that inflammation being once set up within the womb, is communicated through the fallopian tubes to the peritoneal cavity, as observed in *post mortems*; that pus was often found in the tubes at their fimbriated extremities and upon the intestines; and that free communication became established through these channels for all morbid influences. It was upon these grounds, that he had resolved to adopt the aspirating method, and as a result of the trial, he now brought before them the following case :

" Mrs. Conbevoei, was confined, Monday 10th of August last, after two hours of marked pains, it being her second confinement. The after-birth was apparently complete. Monday and Tuesday apparently doing well. The lochia flows naturally, but a portion of membrane, without odor, of about five inches in length was found in the evacuations. Wednesday, regular flow of lochia without odor. Thursday 13th, fourth day after labor, the evacuations are accompanied with new portions of membrane of bad odor, which are renewed on Friday and Saturday, and on Sunday the 16th.

Monday 17th.—First chill at two o'clock; and suppression of the lochia, which had continued producing an offensive odor until then.

Tuesday 18th.—Second chill at seven P. M. Lochial flow had appeared twice during the day, but with an infectious odor.

Wednesday 19th.—Complete suppression of lochia, considerable tumefaction of the abdomen, pain in the groins, in the middle of abdomen and over the kidneys, the whole accompanied with

renewed chills. The physician in attendance had for two days administered uterine injections.

In this state M. J. Guérin found the case Wednesday, the 19th, at half-past four, P. M. The uterus reaches to within two inches of the umbilicus. The pulse is depressed, much accelerated and scarcely perceptible. He considers the symptoms as denoting the onset of a well marked case of puerperal peritonitis.

He ordered the patient to be placed in a warm bath, having a free communication established with the uterus by means of a large canula placed in the vagina.

He introduced the tube of an aspirating instrument (of his own invention) up to the uterus and then aspires the gases and air which the uterus contained; immediately afterwards he introduced another tube of the same instrument, and injected a solution of phenic acid into the cavity of the vagina. Two minutes later he replaced the vaginal tube in communication with the aspirator, which brought forth the liquid injected, slightly turbid, but with a notable quantity of gases. He immediately repeated the introduction of three hundred grammes (about one and a half ounces) of a solution of phenic acid, and five minutes after the aspirator brought forth with the injection, yellowish-red purulent matter, holding in suspension clots of an infectious odor. While these phenomena were being produced the tumefaction diminished in so sensible a degree, that at the termination of the operation the abdomen was reduced to almost its normal size. From this moment the lochial flow continued moderately, with its usual color. He then surrounded the abdomen with a bandage, exercising moderate pressure.

To the chill which the patient had experienced, succeeded a high degree of heat followed with considerable perspiration. The pulse rose suddenly; fever and delirium lasted a portion of the night, but in the morning the patient slept. On awakening in the morning the abdomen was of its natural size, the lochia flowed moderately without odor. The pulse was scarcely febrile, and she demanded nourishment. It is to be remarked that the secretion of milk, abundant before the advent of the complication, was completely suppressed during the last three days.

He began to give nourishment on Thursday. A few general baths, and a few vaginal injections, were the only means employed to dissipate any remaining sensitiveness of the abdomen.

On the fourth day after the application of his apparatus, the natural order of things had been restored, the patient ate, digested well, slept, and the secretion of milk was completely restored, and sufficiently abundant for the alimentation of the child. Since this time, Mrs. C. has enjoyed the best of health.—*Jules Guérin, Gazette Médicalé.*

On the Diagnosis and Treatment of Fracture of the Cornea: By M. Fano.—Journal de Médecine, et de Chirurgie, October 1868. (Enseignement, libre de M. Fano.)

Mrs D—, aged 23, laborer in a vineyard at Bresles, was sent by Drs. Evrard and Vallery, to the clinic of M. Fano. She was struck in the left eye whilst at work, and now complains of a foreign body in the depths of the eye, and is unable to pursue any kind of labor, on account of the difficulty of exposing her eye to sun light. She was examined by M. Fano on the 25th of Aug. He lays particular stress on the importance of not allowing the mind to be misled by the account of patients; for here particularly, the patient insists on the presence of a foreign body, and is apprehensive that no relief can be obtained without an operation.

At the time of the examination, there existed photophobia of the left eye, and the skin of the lower lid of that eye presented an erythematic furrow. The palpebral conjunctiva was moderately injected; the scleroteal conjunctiva slightly hyperæmic. Towards the inferior and external portion of the cornea, near to the limbus, there existed a whitish exudation, presenting at its centre a rusty colored spot, which examination with a lens showed to be formed of capillary vessels. The pupil was not more dilated than that of the right eye; it was perfectly clear and black. The ophthalmoscope showed that the middle media preserved their usual transparency, and that no alteration of the retina existed, nor of the optic papilla.

Examination by oblique light exposed an adherence of the iris at the level of the exudation on the cornea, i. e., an anterior synechia. It is worthy of remark that the patient could tell the time by a watch with her affected eye. M. Fano concluded that there existed no foreign body in the eye, and that the patient was actually affected with a traumatic keratitis, consecutive to a small fracture of the cornea, produced by a stone on the eye.

The name, fracture of the cornea, was first introduced in oculistic language by M. Fano, (see *Traité des maladies des yeux de l'auteur*, vol 2, p. 12.)

The cornea is liable to various kinds of wounds; pointed and cutting instruments produce but simple incised wounds of that membrane; but blunt instruments shatter the cornea as they would a pane of glass or a flat bone; the solution of continuity at times is linear, at others star-shaped; it is a sudden and violent division of the cornea in the manner of the sudden division of the bones; which last lesion pathologists denominate fracture, and distinguish from wounds of bones.

There existed then, with the patient, a fracture of the cornea; at the moment when this lesion was produced, a portion of aqueous humor escaped, and the contiguous portion of the iris came in contact with the corneal wound. The lips of the

wound became inflamed, and plastic lymph secreted during the process of inflammation produced adhesion of the iris to the cornea. At the same time a similar process occurred on the anterior surface of the cornea, by which the borders of the wound became vascularised, establishing a true traumatic keratitis of which we still perceive the remaining traces.

If the foreign body had penetrated into the eye instead of expending its projectile force against the cornea, we would have had a laceration of the iris, and most probably traumatic cataract.

The entire absence of these lesions should dispel all idea of the entrance of the foreign body into either of the chambers of the eye, an opinion fully confirmed by the ophthalmoscope.

From the preceding data, M. Fano concluded that there existed a traumatic keratitis, accompanied with photophobia, and we here append the prescription of the surgeon :

First ; to bathe the eye every three hours with the following solution :

Aqua distill.....	f. $\frac{3}{5}$ v.
Laudanum Syden.....	gtt. xxxj.
Sulph. atropin.....	five-sevenths of a grain.

Second ; during exposure to day light to wear blue spectacles.

Third ; to take at bed time, a powder of the following combination :

Quiniæ suph.	gr jss.
Pulv. Belladon næ.....	two-sevenths of a grain.

Under the above course the patient improved rapidly. Photophobia and vascularisation diminished, and on the first of September the patient returned home, happy to have escaped an operation of which she entertained such legitimate fright.

QUARTERLY RECORD OF OPHTHALMIC AND AURAL SURGERY.

COLLATED BY W. S. MITCHELL, M. D., PROF. OF ANATOMY, AND OPHTHALMIC MEDICINE AND SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Dislocation of the Crystaline Lens, and its effects on Refraction, by Henry D. Noys, M. D., New York.

A man 45 years old, in a drunken brawl, received a blow with the fist on the left eye. About three weeks after it happened, he came to the N. Y. Eye and Ear Infirmary. He was examined by Dr. Watts, and his crystaline lens found to have been displaced

downward, vertically, so that its upper rim rose above the enlarged pupil. A solution of atropia had been put into the eye to facilitate the ophthalmoscopic examination. No other injury was discerned, and the eye was but moderately injected. About a week after he said that his sight had greatly improved. The crystalline lens was now seen to come forward into the anterior chamber. This fact was easily known by the way in which the iris was pressed back, and by the brilliant border of the lens, where a total reflection of light occurs. The lens had a faint amber tinge, appropriate to the age of the person, but was perfectly transparent. It was of course still inclosed in its capsule.

The change of position had been brought about by a vigorous fit of sneezing. He had taken a pinch of "catarrh snuff," and sneezed seven or eight times the night after the atropine was dropped into the eye. Immediately afterward he found his sight improved.

The lens being in this position, I at once wished to ascertain what effect would ensue in the refraction. I knew that the nodal point must be brought forward, and if the man were emmetropic he must now be myopic. The interesting point was to ascertain the degree of myopia. Inasmuch, too, as the lens is less in bulk than the capacity of the anterior chamber, its axis would be below the visual axis, because the upper edge of the lens was lower than the periphery of the iris, and of course the cornea and lens were not "centred," as the opticians say. On this account there would be astigmatism. The examination was made by Dr. Schiff, and afterwards verified by myself. The good eye was found to have hypermetropia manifest $\frac{1}{18}$ —the damaged eye to have myopia $\frac{1}{9}$ with myopic astigmatism $\frac{1}{24}$.

The formulæ are as follows:

$$\text{Right Hm} + \frac{1}{18} = V, \frac{20}{40}$$

$$\text{Left M} - \frac{1}{9} \text{ Ast} - \frac{1}{24} \text{ axis } 30^\circ \text{ (Javal)} \quad V = \frac{20}{50}$$

It follows from this that the displacement of the lens into the anterior chamber causes a myopia about $\frac{1}{9}$ —it being assumed that the damaged eye originally possessed a hyperopia the same as the other.

The results found by trial glasses were afterward verified by the ophthalmoscope in the upright image, and proved to be in accord.

The man was unwilling to have the eye operated on, and did not feel disposed to urge its being done, because he was so comfortable. Should the lens become opaque, as it is likely to do, he will probably be willing to have it removed.

Mere displacement of the lens may give rise to a variety of errors of refraction. If it be partially luxated and stand obliquely behind the pupil, or if decentred, it produces simple astigmatism. If it descends so as to permit light to fall through its rim, and also to enter the pupil without traversing the lens, there will be astigmatism for part of the pupil, and extreme hyperme-

tropia for the remaining part of the pupil. If the lens be wholly out of the pupil, as in the common operations for cataract, there will be extreme hypermetropia. Again, as in the case prescribed if the lens be in front of the iris, the patient will be both myopic and astigmatic, or will be merely myopic if the lens be correctly centred.—*New York Medical Record*.

Double Distichiasis, with operation. By B. JOY JEFFRIES.

March 7, 1867.—A piano-forte player by profession, æt. 23, has distichiasis of all four lids. No operation had been done but evulsion of lashes, and last year and a half astringent collyria. He has suffered for years, and although vision is much reduced, the cornæ seems tollerably clear. On all four lids the position and direction of the ciliæ would seem to preclude other than a double growth. The lower lid was scalped, and Arlt's operation done on the upper lid, and, March 16th the same on the other, the left eye. April 6th, discharged, well, with vision already improved enough to play the piano at night.

Arlt's operation consists in splitting the lid, and taking out an oval piece of skin above, and then sliding the portion containing the lashes, thereby retaining them and yet preventing their rubbing on the cornea, the source of all the trouble. When this is not possible, scalping or removing only that portion of lid containing the ciliæ, are the operations indicated in these cases, and which, were they more generally understood and oftener done, would save many an eye from total blindness.—*Boston Med. and Surgical Journal*.

Clinical Remarks on Color-Blindness and Colored Vision in the Diagnosis of Eye Disease: By ERNEST HART, ESQ., Surgeon in Charge of the Ophthalmic and Aural Departments, St. Mary's Hospital, London, and Lecturer to the School.

ANOMALIES in the perception of colors have been frequently met with under certain conditions, and associated, in some instances, with impairment of visual power; in others, with perfect functional activity of the eye. In the first place, we have that condition of imperfect color-blindness which was called by Goethe akianoblepsia, and is well known in this country as Daltonism; this defect is congenital, frequently hereditary, and limited, in most cases, to the perception of color, acuity being perfect. Again, the internal administration of certain medicinal and poisonous agents has been known to produce forms of chrysopsia or colored vision; violet-vision sometimes occurs during lead-poisoning, and investigations made by Martini, Rose, and Schultze, prove that santonine, when given in large doses, will cause ob-

jects to appear of a yellow or yellowish-green color. A third condition under which these morbid chromatic changes occur, is the existence of some form of amblyopia, depending upon disease in the brain, or some other important organ in the body. This fact was first pointed out by Wilson and Taylor, who observed that total or partial blindness was often associated with injuries and diseases of the encephalon. This subject, however, did not receive much attention before Galezowski, one of the most accomplished of continental ophthalmoscopists, struck with the influence exerted by the various morbid changes of the optic disc and retina upon the chromatic sense, thought it deserving of investigation, and submitted all amaurotic patients coming under his notice to an examination into the condition of his faculty of vision. The results of these inquiries have been recently published in a volume which contains, in addition to important conclusions as to the diagnostic value of chromatic observations, an equal important and valuable section on the physiology of color sensations. In 1802, Dr. Thomas Young communicated to the Royal Society his views upon the latter subject, which were subsequently supported by Helmholtz, and widely accepted in Germany. According to this theory, the eye possesses three kinds of special nerve-fibres for receiving and conducting three different colors—red, green, and violet. Homogeneous light excites the three forms of nerve-fibres with an intensity varying according to the length of three undulations to which the eye is sensitive; the longest undulation excites most strongly the fibres sensible of red, that of medium length the green fibres, and the shortest undulation the violet fibres. This view is justly doubted on grounds both of minute anatomy and pathology, which indicates that the faculty of perceiving colors is fixed in the bacillary layer of the retina. The true chromatic organs of the eye may be considered to be the cones, each of which bodies acts as a small prism, decomposing the light, so as to form at its base concentric colored circles corresponding to the colors of the solar spectrum. The following are some of the chief results of clinical investigations made by using a fixed scale of color types, in which scale the principal colors of the spectrum are arranged in the order adopted by M. Chevreul. In retinal apoplexy, when the diffusions are large or situated in the central parts of the retina, the eye often sees objects colored red or green, which coloration is sometimes changed during the course of the disease into violet or yellow. In albuminuric retinitis, partial color-blindness is a symptom of advanced disease and disorganization of the retinal tissue near the yellow spot. In syphilitic inflammation of the deep-seated parts of the eye, perception of green colors, and sometimes of red, is lost. In cases of atrophy of the optic disc and of amblyopia caused by chronic alcoholism, similar perversions of the chromatic sense are presented; there is anaesthesia of the retina to certain compound colors, as light and dark green; violet

is also taken for red, and brown for green. In atrophy of the disc, these aberrations are permanent; whilst in spirit-drinkers, they vary from day to day, and even hourly, presenting a succession of abnormal visual phenomena. Descriptions are also given by Galezowski of color changes occurring with glycosuric retinitis, general and localized atrophic choroiditis, and during the course of various cerebral affections. These I have not fully verified. The remarkable morbid changes which occur in these diseases, do not appear to me to be so precise and uniform as described. But I am pursuing the clinical inquiry with care, and shall shortly publish some further results. The subject is an extremely interesting one, and deserving of careful study, as the chromatic scale is, in my opinion, an addition to ophthalmic means worthy of cultivation, and likely to be of value in the diagnosis of many cases of amblyopia of which both the ophthalmoscope and the nature of the subjective symptoms fail to give any full explanation.—*British Medical Journal*.

A Case of Cataract Attended with Complications in the Operation :
By WM. MASON TURNER, M. D., of Philadelphia.

IN June last (1868) I was consulted by Mrs. S., residing in the State of New Jersey, in regard to some affection of the eye. On examining the organ with an ophthalmoscope, I detected an opacity in the line and to the rear of the pupil. With the aid of the ophthalmoscope and lens, and keeping in mind the differential diagnostics in the premises, I determined to my own satisfaction the presence of a cataract. What its precise nature, hard or soft, I could not satisfy myself fully. The opaque lens, on its anterior face, had, in certain lights, the dark-yellowish hue peculiar to hard cataract; at other times and in other lights, it showed the peculiar pearly aspect of the soft variety of the affection.

I saw the lady several times; she, in the meantime, telling me that the physicians in her place of residence had informed her that she had cataract, but being unable to determine precisely its nature, declined to operate. The patient was not, at the time I saw her, in a condition physically to warrant an operation. She had a strumous, broken-down look, and was quite weak withal. Without committing myself as to a positive diagnosis, I prescribed a tonic alterative mixture and generous food, and requested the lady to return to the city, to see me, in the fall. She presented herself to me on the 10th of November last, appearing in much better general health than when I saw her in June.

On examining the cataract again, I found certain changes had taken place, the lens looked smaller, if anything, than it did before, and was much darker and yellower. I diagnosed it to be

hard cataract, and proposed an operation—that of extraction. She willingly consented; and on the following Tuesday, accompanied by Dr. J. Solis Cohen, of this city, I proceeded to the house.

Dr. Cohen examined the eye closely, and pronounced the cataract to be hard. He advised the operation of extraction. There were several hindrances to an easy operation in the case; the eye was much sunken in the socket, the malar bone prominence very high and "in the way," and the cornea was very flat. Yet I did not consider these drawbacks sufficient to let the operation go by default. I began by entering the knife (Beer's) and proceeded step by step in the operation *secundem artem*. I made the superior flap successfully, and allowed the eye to close for a moment. On examining it cautiously again, to my chagrin, I saw that the cataract showed no disposition to move. Gentle pressure on the inferior portion of the globe did not stir it. I fancied my flap was not free enough. So gently replacing the knife, I was proceeding to extend the incision a line or two downward, when the thought occurred to me to rupture the capsule. I touched the anterior face of the lens slightly with the knife, when, as if by magic, the entire structure broke up. I saw at a glance the true condition of affairs. It was a *mixed* cataract—the anterior portion, or the capsule, being hard, the rest soft. I determined to make the best of it, and cut through the pupil into the gelatinous mass as well as I could with the knife, and then introduce a curette through the same opening, and finish it. I was compelled to work in a hurry, and had to meet with several troubles—the displacement of the iris being the chief.

I closed the eye as quickly as I could, put on a light compress and bandage, placed the patient in bed, and ordered a half-grain of morph. sulph. Then the real trouble began. A parotid abscess of enormous size supervened, and then erysipelas. The woman was prostrated; yet I feared tonics and strong food, on account of dreaded inflammation in the eye. I was between two fires, as can be understood on a moment's reflection. I was finally compelled to open the abscess twice, and at last had to resort to iron, to arrest the erysipelas.

The case, despite these drawbacks, did well. On examining the eye ten days after the operation, the patient said "she could see better."

I have no doubt that with proper cataract glasses, the sight will be much improved. She left for home ten days ago.—*Medical and Surgical Reporter.*

Synchysis Scintillans. By A. SAMELSON, M. D., Manchester.

Mary Locker, aged 72, who, 7 years ago, received a severe injury to the left side of her head, and lost her right, and at present,

atrophied eye, in consequence of a stone thrown at her by a boy in the street, noticed something the matter with the remaining, left eye, about the beginning of last August. With a x6. lens there is S₄ and No. 4 Moorfields, is read in day light. The ophthalmoscope shows the optic disc to be of a manifestly whitish color and its arteries greatly altered.

An abundance of bright, loose, roundish particles of various sizes, but mostly punctiform, are seen, like a silver shower, to move about in the vitreous humor, every now and then hiding the optic disc from view. They can, when the pupil has been dilated be perceived by the naked eye.—*British Medical Journal*, Jan. 9th 1869.

Notes of a Case of Keratitis: By M. CHARTERIS, M. D., Assistant Surgeon, Glasgow Eye Infirmary.

IN Mr. Hutchinson's clinical record of cases of keratitis, which he ascribes to hereditary syphilis, only two cases are mentioned in which the subjects of this peculiar malady are reported to have had children. Doubtless this is in a great measure due to the fact that keratitis occurs, as a rule, before marriageable years, and that those who have been attacked by the disease are lost sight of after the affection has been cured or palliated. Assuming the syphilitic origin of the disease to be a correct inference, I am somewhat at a loss to account for the non-transmissibility of the poison to the children in the following case, which lately came under my observation :

M. G—, aged thirty, has had keratitis for the last ten years, the affection being subject to various relapses. For six years she has been an out patient of the Glasgow Eye Infirmary, presenting herself at the institution at intervals, or whenever the disease appeared in any aggravated inflammatory form. At the time I first saw her, about two months ago, both eyes presented the dim, ground-glass appearance of keratitis. The two upper central incisor teeth were very typical: they were peg-shaped, notched vertically, and set angularly to one another. The bridge of the nose was sunken, and the general contour of the face exhibited all the peculiarities which Mr. Hutchinson has so faithfully delineated. She had no glandular enlargement, nor was there any evidence of hereditary struma. She has been married six years, and has had three children; the eldest two being alive, and the youngest having died during dentition. She assured me that her children were quite healthy, and a personal visit to her house satisfied me of the truth of her statement. The eldest, a boy, was a strong, well-made, rosy-cheeked little fellow. The second child, a girl aged four years, had all the evidences of good health and a good constitution. The father and mother of M. G— were alive and

well, and they assured me they had always enjoyed excellent health, and had never had any eruptive or other disease. They had had two children, M. G.— being the elder. The younger also was married, and was the mother of two healthy children.

From the history of this case, thus briefly indicated, it may seem that the cause of keratitis in the patient under observation, was as obscure as the non-transmissibility of the syphilitic poison (?) to her children was remarkable.—*The Lancet, January 30.*

Suppurative Inflammation of the Cornea, with successful result after Iridectomy : By G. HAY, M. D.

MRS. X., aged twenty-five has had trouble in the left eye for about two weeks, vision much diminished. Cornea somewhat opaque in the middle. There has been considerable pain in the region of the eye. After being under the usual treatment, from October 28th to November 28th, the author describes as follows the condition of the eye: "Light is disagreeable; eye waters when examined; pus increased in anterior chamber; some pain; vision very poor." Iridectomy was performed on 28th November, the coloboma being upwards and inwards. On 22d January: "No pain; redness gone; the opacity almost gone; vision pretty good; health good."—*Boston Med. and Surgical Journal, Feb. 18th.*

Intra-Ocular Bleeding, and Pain following Iridectomy.

THE above author also describes, in the same paper, a very rare and unusual result of iridectomy, viz: intra-ocular bleeding and pain, necessitating enucleation of the globe. The anterior history of the case was, that "the sight of the left eye had been failing for six years, with pain, at times. For the past two months, the pain has been severe, and for the last five weeks has prevented him from working. * * * Patient formerly suffered much from bleeding from the nose." In order to relieve the pain, iridectomy was performed at noon, on the 27th July; shortly after the operation was performed, the bandage was noticed to be stained with blood, and the pain had increased; this condition persisting until four o'clock the eye was enucleated. On the 10th of August the patient was discharged convalescent.

Cutaneous Horn of the Eye-Lid.

Dr. Henry L. Shaw, in the Boston Medical and Surgical Journal, of February 11, 1869, just describes a very interesting case of cutaneous horn of the eye-lid. "The horn was firmly attached near the middle of the lower lid of the right eye, just below the

tarsal cartilage, with which it had no connection. It was curved, and looked not unlike the beak of a bird. It measured over the superior curve one inch and seven-eights. The outer portion, for an inch or more was of a brownish color, rough, and longitudinally furrowed, very hard and horney in appearance. The end was blunt, the point having been snipped off with scissors. The inner fourth was more the color of the skin, elastic to the touch and of about the density of cartilage. The base, when examined from the inside of the lid, had the appearance of being filled with sebaceous matter." The exerescence was easily and readily removed.

Moon Blindness.

WE find in an editorial in the New York Medical Gazette, February 27, 1869, the following correct views expressed upon moon blindness: "The absence of clouds from the air is the true cause of the mischief. There is not sufficient check to the radiation of heat from the eye balls, and the consequent chill results in temporary loss of sight, and sometimes in permanent injury."

QUARTERLY RECORD OF SURGERY.

COLLATED BY SAM'L LOGAN M. D., PROF. OF SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Cleft Palate. Extract from a Clinical Lecture delivered at the Massachusetts Medical College, Harvard University, Dec. 21, 1868. By HENRY J. BIGELOW, M. D., Professor of Surgery. Reported by Henry H. A. Beach, M. D.

In showing a plaster cast of a cleft palate recently operated upon, I would direct attention to a mechanical expedient for aiding union of the palate in the operation of staphyloraphy, first employed so far as I know in this case. Before doing so, it may be well, briefly to review this deformity and the operation for its relief. The cleft may be median or lateral. It is either a continuation of a hare-lip, or exists independently. In the latter case it may involve both the hard and soft palate; or only the soft palate may be affected—and in cases very favorable for operation, to an inconsiderable degree. The result of this deformity is chiefly noticed in the nasal intonation of the voice, to correct which various expedients have been proposed. The name of the late Dr. J. Mason Warren is associated in this community with many of our earlier operations, and I think to him is fairly due the original suggestion of freely liberating the soft palate by dissecting it from

its upper attachments, before drawing together the margins thus liberated. This is perhaps the great improvement of the modern operation.

I am not aware that Dr. Warren described the anatomy of the parts thus detached. This was afterwards done by Mr., now Sir Wm. Ferguson, who, examining the cleft palate of a dead child, showed that this malformation involved a contraction of the levator palati, and sometimes other muscles. I do not know that this distinguished surgeon detached the flaps in a way which practically differed from that repeatedly accomplished by Dr. Warren, but having described anatomically the parts thus dissected, his name is associated with this feature of the modern operation. The late Dr. Warren was impressed with the belief that a large majority if not all the subjects of this operation were materially improved, if not cured, of their nasal voice. A case of my own, fifteen or more years ago, led me to scrutinize more narrowly, and I was led to the conviction that although a patient occasionally shows a remarkable improvement in speech the rule is the other way. Neither can improvement be always expected at once, but only after a lapse of sufficient time to allow the parts to become flexible. The case I have just alluded to was that of a young lady, in whom the nasal intonation was very marked, and in whom the only apparent deformity of the palate was a partial cleft of the uvula alone. The palate was ample, and to appearance, well under muscular control, and yet this congenital deformity of a bifid uvula was associated with some imperfection in the mechanism of articulation, which months of effort on her part, even after the fissure was closed by the operation, failed to overcome. This case established the fact that something is wanting for perfect articulation beyond a palate of normal size and appearance; and that although the lateral flaps of a cleft in the soft palate may be attached to each other, often with a result beautiful in appearance, it does not therefore follow that the nervous and muscular action will be perfectly restored. In the case of a wide fissure extending well forward through the bone, the parts are actually insufficient to restore the palate, and then the usual result of the common operation is a band of greater or less width tightly stretched by cicatricial contraction across the palate, bounded behind by a naso-pharyngeal chasm, which it is insufficient to close, and in front by a fissure in the bone which still remains. It is difficult to say that the phonation of such patients is not improved a little; they are, indeed, generally inclined to flatter themselves with this belief after an obturator has been adjusted to the bony opening. A patient with palatine fissure, in articulating the words *bad man*, says *man man*, vainly trying by facial distortion to occlude the anterior nares; while a patient with nares occluded by a tumor, or a cold in the head, says *bad bad*, or *beautiful bood*, as in the familiar poetry of *Punch*. Between the nasals *m, n*, and *ng*, on the one hand, and labials *p, b*,

the linguals *t*, *d*, and the gutterals (improperly so called) *k* and *g* hard, made with the occluded nares, on the other hand, there is a wide difference, and perfect articulation requires the machinery for enunciating, at will, both sets of consonants. This the healthy palate supplies in opening and hermetically closing the posterior nares. Yet there are persons with sound palates who habitually talk through their nose, as the conventional Yankee is said to do. Such persons do not make efficient use of their levator palati and superior constrictor of the pharynx. While we may hope to approximate our patients to the normal condition of such persons, it should be remembered that a very small communication with the nasal fossæ may materially modify the intonation. The nasal quack of the duck, for example, is produced by the reverberation of a comparatively small elastic cavity; and a hole in the human palate a quarter of an inch or even less in diameter, may produce the same result. It cannot be denied, however, that a very marked improvement now and then results from this operation, especially in a favorable case; and in view of this possibility it is certain that patients will continue to demand it at the hands of the surgeon.

The expedient to facilitate union, before alluded to, consists in the employment of a temporary artificial palate, in this instance of hard rubber, to protect the parts during cicatrization. Its use was suggested to me by Dr. Beach, as a means of shielding the tongue from metallic sutures, and thereby enabling the surgeon to employ them conveniently during this operation. It also occurred to me that this arrangement would protect the palate from the peristaltic action of the tongue in swallowing, and other involuntary movements which endanger union. It is pretty well established that the success of the modern operation for vesico-vaginal fistula, mainly depends upon the use of metallic sutures planted close together, so as to insure close contact of the wound, with an irritation so inconsiderable that they can be left in place from one to two weeks. Similar advantage ought to accrue from their use in the palate. The hard rubber palate here shown was made by Dr. Sheppard, Adjunct Professor in the Dental School of this University, and fitted so as to cover the whole region occupied by the palate after the operation. It conforms with the arch of the normal palate, leaving an interval of about a quarter of an inch between it and the mucous membrane. Behind, it bends down just far enough not to incommodate the tongue, while in front it was in this case keyed in the interstices of the incisors left by the former hare-lip, and latterly attached by a string to a tooth on each side. The whole is made as accurately as if it were a plate for false teeth. A hole near the front admits the nose of a syringe, by which the interval between the plate and palate was syringed with warm water twice daily. In this case, I cannot doubt that this contrivance was of service. The fissure was wide, reaching forward to the incisors. The flaps were de-

tached well forward from the bone, and seven fine silver stitches were inserted. The plate was not removed for the examination of the parts until the eighth day, when every stitch was found in place and was removed, the union being perfect. During the succeeding week the contracting cicatrices at the margin of the wide fissure of the bony palate drew apart a quarter of an inch of the anterior extremity of the wound, which is less than usual in these cases. The width of the remaining band was about one inch and a quarter, which, considering the size of the palate, is more than we could have expected. I cannot but think that whatever be the operation upon the palate, a more perfect union will be secured by silver sutures thus protected than by the ordinary method.

It remains to notice some of the expedients which have of late years been adopted in connection with this operation. One of the most valuable of these is the so-called "gag" of Mr. T. Smith of London, a steel instrument by which the jaws are admirably kept open, and the tongue at the same time depressed, so that the parts are fully exposed, and the operation can be performed with facility; under ether, even in young subjects. This one, imported by Dr. Hodges, has been fully tested in the operations of staphyloraphy, excision of tonsils, etc., with ether, during the past few months at the Massachusetts General Hospital, and the operation above alluded to was done with its assistance.

Much attention has been paid to the different methods of closing the openings behind and in front of the transverse band of varying width which result from the union of the soft palate in large fissures. This has usually been affected with an obturator. I have not met with as many good results as many writers claim to have obtained, by an operation which consists in simply detaching the soft tissue from the bony margins of the anterior fissure. Of this tissue Langenbeck says that it is "more fragile and more adherent to the periosteum as we approach the gums; in fact, you can only borrow auto-plastic flaps with a chance of success from the posterior part of the mucous membrane, the thickest and least adherent, especially that which covers the horizontal plates of the palatine bones." But there can be but little doubt that by detaching this flap we secure a union of the soft palate to a point a little further forward than might otherwise be possible, and so facilitate the subsequent use of an obturator.

A later operation, usually attributed to Langenbeck, is said to be much more effectual in closing the anterior fissure. It consists in denuding the whole horizontal bony palate, and uniting the soft tissues thus detached upon the median line. A good idea of this operation may be obtained by supposing two large lateral flaps to be thus formed, from the whole soft and hard palate combined. The tissue is best detached from the bony palate by square or spade-pointed blades inclined to their handles, by which the tough tissue is cleanly dug or hoed from the bone.

After starting it, blunt instruments work best. Such flaps are still insufficient, anteriorly, and a lateral incision is therefore made on each side, close to the alveolar processes from the second incisor nearly to the last molar. These incisions stop in front, at the incisors, and behind near the hamular processes, in both cases before reaching the bony canals of the arteries. Thus the arteries of the flaps are preserved, before and behind, and the flaps are wholly detached from the horizontal bone, except at these three points; the anterior attachment being a pedicle. These incisions are usually made first, and the process of detaching the soft parts is there begun and continued inward toward the median line. When the fissure is wide, and one or both sides of the bony palate vertical, the lateral incisions may not be needed. The interior fissure thus occluded by obturator or membrane, can have no immediate influence in bad cases upon the pharyngeal opening; although it is quite probable that after a lapse of time the flexible membrane will insure a more flexible soft palate and a better phonation than an unyielding obturator.

M. Passavant, of Frankfort, in a paper on the means of obviating the usual intonation in congenital fissure of the bony and membranous palate, etc., (*Arch Gén. de Méd.*, 1865), after alluding to the inefficiency of present operations to attain this result in a majority of cases, cites a case of much improvement after an operation in which the posterior border of the soft palate was attached to the pharynx behind it, the surfaces being first denuded and then placed firmly in contact by means of sutures. This result, however, was only attained at the expense of a transverse incision of the soft palate, by the gaping of which the palate was brought into contact with the pharynx. I ought here to add that, within a few months, I have attempted this operation in one instance without liberating the soft palate by a transverse incision, and that in this instance the pharyngeal border failed to unite. But it seems not improbable that these and other comparatively recent investigations will lead to some operation to be performed under ether (with the invaluable aid of the dilator above mentioned), which may so far occlude the nasal cavity or shut it off from that of the mouth by a flexible septum, as to insure in bad cases an improvement of the voice, which now only occasionally results from the operation in such cases. It is probable that the hard and soft rubber palate, alleged to afford relief in these cases without operation, would be even more efficient as the results of surgical interference become more complete.

It remains only to describe the common operation. If ether is not to be used, the patient should educate the soft palate to insensibility for a few days by frequently tickling it with a feather. The best way to hold the soft palate for dissection is with double hooks terminating in firm single points, meeting and crossing a little. A single puncture is thus made. Forceps slip, tear and bruise the parts. I divide the muscles until the flaps

are free, with scissors doubly curved on the edge and flat, one for each side, passing the fingers occasionally behind the flap, to find what is most tense and unyielding. The edges are now to be pared; this incision bleeds less, and is therefore perhaps best done first. The whole thickness of the edges of the palate should be denuded, and if there be doubt upon this point, owing to the discoloration of the parts, the detached sliver may be floated in water to see if it is of uniform width. Further dissection may be made before or behind at discretion, and the parts brought together by common small curved needles threaded with silk or wire; then each suture, to facilitate finding it again, has its ends united, and each is drawn in succession through the fissures of a plate of cork, cut like a comb and held on the forehead of the patient. The best needle-holder should have jaws not a quarter of an inch wide, that they may not straighten a curved needle, and not extending half an inch beyond the pivot, that the long handles may secure a firm grip of the needle. The best needles are the smaller sizes of glovers' needles, curved with different bends, the temper being then partially restored and their convex surface flattened by grinding or honing, to prevent them from turning in the forceps. The silk sutures are now tied with common knots; or the wires with a half knot and then a twist, and are to be left in place until union, or as long as they are of any service.—*Boston Medical and Surgical Journal.*

Salivary Fistula Successfully Treated by Operation. (Under the care of MR. JOHN D. HILL,) Royal Free Hospital, London.

SALIVARY fistula is perhaps one of the most troublesome and intractable affections requiring surgical aid, and this is explained by a consideration of the physiological processes connected with the structures implicated in its course.

In some instances, however, a successful issue may be attained in a comparatively short period of time, provided the patient be constantly under the surgeon's eye.

The cause of this affection being understood, the first step in surgical treatment is to establish a free communication between the gland and the cavity of the mouth; this having been accomplished, the fistula is then to be closed.

Mr. Hill has adopted the following operation:—The patient having been placed upon a sofa, a very fine silver or gold probe is carefully and gently insinuated along the whole track of the fistula so far as it will pass. The forefinger is then introduced into the mouth to feel for the bulb of the probe, which is generally well covered with soft parts; if this can be felt, then a curved or straight needle (threaded) is guided along the probe and then thrust through the mucous membrane into the mouth. One end

of the thread is now drawn out of the mouth, while the needle is withdrawn with the other end; the probe being returned, the needle is again passed along it, and thrust through at another point one-third of an inch from the first, and, if possible, nearer the gland. The probe is now withdrawn, and the ends of the thread, which are both in the mouth, are tied together, forming a small seton. Mr. Hill has sometimes had occasion to adopt certain modifications in the steps of this operation, as in Case No. 1, where the fistulous channel was extremely long and oblique; here he passed the needle through the entire thickness of the cheek, exactly opposite the bulb of the probe; and again, in Case No. 2, where the fistula was extremely tortuous, he succeeded in passing the thread from within, taking the bulb of the probe as his guide.

The seton is retained for a variable time, but as soon as all irritation consequent on the first stage of the operation has subsided, the edges of the fistula are pared with a fine needle-pointed knife, then carefully drawn into direct apposition, and, lastly, keep covered with collodion for three days. The proceeding may have to be repeated several times at intervals; but if great care has been taken, and no severe inflammation has ensued, at the end of a fortnight or less, the fistulous aperture will be found, if not quite closed, much reduced in size, and may, in the latter case, be touched with a fine cautery to complete the cure.—*Medical Times and Gazette.*

*Partial Luxation of the Articulations of the Pelvis—Recovery.
(Under the care of DR. ROUTH,) Samaritan Hospital, London.*

REBECCA P., aged twenty, resident of the country, was admitted under the care of Dr. Routh, at the Samaritan Hospital, July 6, 1867, supposed to be laboring under uterine disease. About five months ago was first seized with pains in the bowels, and found she could not walk without difficulty. This gradually increased till she could not walk at all without assistance, and then only very imperfectly, and was consequently obliged to pass most of her time sitting on a chair. Sometimes she felt her limbs "crack" as she walked, but nothing more. She does not remember that any sudden effort, long walk, or fall preceded her illness which she could in any way regard as a cause. She had not lifted any unusually heavy weight, except perhaps when occasionally nursing her parents, both of whom were fat and heavy, and whom she may have occasionally lifted. But she never noticed anything as having occurred on any one of these occasions. There was slight backache. The external pudenda were very sensitive, and more or less leucorrhœa had persisted for five months. The cervix was somewhat conical. In other respects the functions were

regular ; nor was she aware there was anything wrong in these parts.

On admission.—The patient being placed in the erect position, and made to walk—which she did with great difficulty, and chiefly by sliding one foot before the other—Dr. Routh placed one hand on the pubes and the other over the scrotum, when a distinct crack, as of two irregular bones rubbing upon each other, was heard, and felt with the hand at the pubes, and also posteriorly at the left sacro-iliac synchondrosis. The nature of the case thus being obvious, a tight bandage was at once pinned round her. She now could hold herself up without assistance, and walked with comparative ease. The diagnosis was subsequently confirmed by Dr. Savage. By the third day she could walk without pain with the bandage on.

A regular bandage of canvas, fastening on by strong buckles, was made for her by Mr. Russell, and she left the hospital for a convalescent institution July 13.

She returned about a month ago (December, 1868), and had grown quite stout, strong, and ruddy, so much so that a much larger bandage was required. She preferred keeping this on, although she could walk without it. The articulations appeared now to be fixed.—*Medical Times and Gazette.*

An improvised Fracture Bed: By ALBERT SMITH, M. D., Peterborough, N. H.

THE following suggestions, which are only the application of a well known principle, seem to me to embody an important improvement in the treatment of fractures of the lower limbs, or indeed of any bed-cases. The apparatus is so cheap and easy of construction, as to be within the means of any one ; and may be improvised at once, under almost any circumstances in which a patient may be placed. I herewith send you the plan proposed and the mode of using it.

I was called in consultation with Dr. W. D. Chase, of this town, to Mr. Miles Robinson, of Bennington, who had fractured his thigh near the trochanter major, by a fall from his haymow. After the bed had been prepared and the fracture adjusted, and extention applied by a weight over a pulley, I suggested that an apparatus should be constructed for the purpose of raising him from the bed, without injury to the fracture. Those who have the means can procure appliances of this kind, such as Dr. Josiah Crosby's fracture bed, or Dr. W. D. Buck's modification, or others; but the patient was poor, and must have gone without them, unless some cheaper arrangement could have been suggested.

We adopted the following plan :—We directed a frame to be made of the length of the bed, and about three feet wide, compos-

ed of four pieces of plank, say 3x2 inches in thickness, if of soft wood, secured at the corners by a mortise or a bolt. Across this frame, from one side to the other, bands of some strong material which might be webbing, or bed ticking, or any other strong cloth, about six inches wide, were carried under the body of the patient, but over the sheet on which he lay, and were fastened securely to the frame on each side, the bands being arranged about six or eight inches apart. This apparatus might remain in its place without any inconvenience, when not used. In order to raise it with the patient on it, a staple was driven into the ceiling over the centre of the bed; a small tackle was hooked upon the staple, and a chord from the corner of the frame was attached to the lower block of the tackle. Assisted by the rope of this tackle the patient can now, with little effort, raise himself as often as may be necessary or desirable.

In this case, the patient had been suffering for years with a painful sciatica of the thigh that was broken, and seemed a most unpromising subject for such a grave injury. But with this apparatus, he is quite free from pain, and seems to be doing as well as anyone could at his age, (66,) it being now nearly four weeks since the accident occurred. In the meanwhile, extension has been kept up without any inconvenience or pain, and there is every prospect of a useful limb, with very little shortening.

This is the second case in which I have used this apparatus with complete success. In the former case, a compound fracture of the tibia, with extensive lacerations of the soft parts, the patient had lain more than forty days on his back, with much suffering and uneasiness. The application of this apparatus surprised and delighted him with the great comfort it afforded, and the ease with which it was used. It was a complete relief to his restlessness; it quieted and soothed him, it gave an opportunity to ventilate and make up his bed as often as desired, it answered all purposes of defecation, and prevented anything like bed-sores, so likely to occur when a patient is long confined to one position.

Boston Medical and Surgical Journal.

Removal of the Entire Tongue ; under the care of Mr. NUNNELEY.

In addition to the five cases of removal of the entire tongue described in a paper published in the British Medical Journal for Nov. 5th, 1866, Mr. Nunneley has since that time had seven others, all of which have recovered. Mr. J. A. Nunneley, M. D., has given us this note respecting them.

The operation has been somewhat simplified, but is substantially the same as described in the paper referred to. The eye in the broad end of the blade, which carries the wire rope of the écraseur, is now made open, so as to allow the latter to be

attached without tying, and to be readily removed when necessary.

In order to insure the removal of the whole tongue, some plan was necessary to prevent the wire rope from slipping forwards after it was placed in the desired position, and before the screw of the écraseur was tightened ; in the earlier operations, hare-lip pins were thrust through the tongue, as far back as necessary, and the loop or rope put over these, which were removed when the rope was so far tightened as to be fixed. This same purpose is now effected much more easily by an instrument slightly curved to accommodate itself to the tongue, and having two branches, at the end of each of which is a notch to receive and push backwards the rope, by which means the latter is kept in position, and may be fixed to any part of the tongue, even to its extreme base.

The following are the details of the operation as Mr. Nunneley now performs it :—A sharp-pointed blade, curved on the edge, about four inches long, and having in the broad end an open eye carrying the wire rope of the écraseur, is passed about midway between the jaw and the os hyoides, but rather nearer the former and exactly in the median line, into the mouth, and is brought out at the frænum linguae, and as near the tongue as possible, and the blade removed. The loop of the rope is passed over the tongue, which is drawn out of the mouth as far as possible by Lier's tongue forceps, and is pushed as far back as necessary by the instrument mentioned above, and held until the screw of the éerasure has been tightened so as gently to fix the rope. Up to this point there has been but little pain, and the voluntary efforts of the patient have materially assisted. He may now be put fully under chloroform. The screw of the instrument is steadily and deliberately tightened, and the tongue gradually cut through.

Twice only has there been any haemorrhage, and in both cases the tongue was unusually soft, and had been cut through too quickly. It was, in each case, arrested without difficulty by a ligature.

The whole operation is perfectly easy and simple, leaves no deformity afterwards—for the small wound under the jaw heals at once,—is attended with but very little pain, is usually almost bloodless, requires but few instruments, and occupies but a short time in its performance. Each of the last three cases has left the hospital about the tenth day.—*The Lancet.*

Recent Dematological Researches.

WITH the new year, several new periodicals have sprung into existence, and from one of them, the *Archiv für Dermatologie und*

Syphilis, the first number of which lies before us, we propose to make a few extracts for the benefit of our readers. The communication is from the pen of Professor Von Hebra, attesting the benefits of the adaption of pads, gloves, socks, or even trousers, of vulcanized india rubber linen (*toile caoutchouquée*), without any other application, in cases of eczema, as previously suggested by Professor Hardy, of Paris; and also in cases of psoriasis, ichthyosis, tylosis, and pityriasis, where it was necessary to remove dry epidermical masses. In all cases, the smooth side was placed next the part affected, and the linen was replaced once or twice a day with a fresh portion. This mode of treatment was also found to be extremely successful in several cases of that terrible affection, the prurigo senilis, abundant perspiration being induced, the itching ceasing, and sleep being obtained. The linen cloth used by Professor Hebra was "made by J. N. Reithoffer, (No 2, Stadt Herregasse), and seems to resemble our spongio-piline. We presume it could easily be produced by English fabricants of vulcanised india rubber, and is certainly deserving of further trial. A second paper in the same journal is by Dr. H. Kobner and Paul Michelson, on "Parasitic Syerosis." The former of these writers had already, in 1864, published observations showing that parasitic form of syrosis existed, which was produced by the *Trichophyton tonsurans*, a fungus that is immediately associated with the *Herpes tonsurans* and *circinatus*. Whilst still maintaining this opinion, he does not deny that an idiopathic form of syrosis may also occur in which no fungus can be shown to be present. A case of the parasitic form is recorded by Michelson, caused by contact with diseased ox-flesh, in which Kobner's views were fully borne out.

We can only add a few remarks on an interesting paper by Moris Kohn, on the "Nature and Treatment of Lupus erythematosus. This affection, which occurs in the healthy and strong, as well as in the stramious, of both sexes, consists of nearly circular spots, of variable size, the centre of which is covered by a thin, dark, yellowish brown crust, or by a cicatricial-like skin, whilst the margin presents a narrow, slightly elevated, bright-red line, beset with yellowish or smutty-brown scales and crusts, or is punctated, and sharply differentiated from the adjoining healthy skin. This form of lupus is undoubtedly developed in the substance of the corium, and occurs upon the cheeks, or upon the bridge of the nose, and occasionally on other parts of the skin of the head, on the palms and palmar surface of the fingers, and on the trunk and arms. It is sometimes accompanied by a remarkable hypertrophy of the sebaceous follicles, with increased discharge of thin secretion, constituting the condition known as seborrhœa congestiva. In regard to the treatment of this affection Kohn considers that internal remedies, as the preparations of iron, arsenic, iodine, and cod-liver oil, are quite subordinate to appropriate and carefully-applied remedies. Amongst these the

following have proved themselves to be in individual cases a certain and positive cure :—1. The spiritus saponatus kalinus of Von Hebra, which is composed of soft soap held in solution in rectified spirits of wine, with the addition of a little spirit of lavender, and is to be diligently applied to the affected part. The scabs separate, blood-drops and serum are exuded, dry up to a crust, and on falling off leave a more or less healthy surface. 2. Liquor potassæ, in the proportion of one drachm of potash to two drachms of distilled water. 3. Liquor ammoniae. 4. Carbolic, acetic, hydrochloric, chromic, nitric, and sulphuric acids; the acetic being perhaps the best. 5. Iodine, especially in the form of tincture, and combined with the iodide of potassium and glycerine. 6. Nitrate of silver. 7. Arsenic paste, in the proportion of five grains to two drachms of simple ointment, and fifteen grains of cinabar. 8. Chloride of zinc, which he has found to be the most efficacious of all the emplastrum mercuriali.

We regret we have no space to give an abstract of a good paper by Dr. Pick on "Eczema Marginatum."—*The Lancet.*

A New Method of Effecting Artificial Respiration: By BENJAMIN HOWARD, M. D., Professor of Clinical and Operative Surgery, Surgeon to the Long Island College Hospital, etc.,

THE following new method of artificial respiration was first taught by me in July last, in my lectures "on the rescue and resuscitation of drowning persons," delivered under the auspices of the Metropolitan Board of health of New York. Though very reluctant to anticipate the more complete exposition of the subject of artificial respiration which I hope at a future time to present, my confidence in the practical superiority of this direct method, induces me without further delay to submit to the profession, by your indulgence, the following brief description of it. It is in the form of an extract from my official report to the Board of Health, dated September 30th, 1868.

I remain, very respectfully, your obedient servant.

BENJAMIN HOWARD, M. D.

The "Direct Method" of Artificial Respiration.—"The patient is laid on the ground upon his back, his arms fully extended backwards and outwards, a firm roll of clothing being placed beneath the false ribs, so as to throw their anterior margin prominently forward.

"The tongue being held forward by an assistant, the operator, facing the patient, kneels astride his abdomen and places both hands so that the balls of the thumbs rest upon the anterior margins of the false ribs, the four fingers falling naturally into four of the lower corresponding intercostal spaces on each side.

The elbows of the operator being then planted against his sides, he has but to throw himself forwards, using his knees as a pivot, and the entire weight of his trunk is brought to bear upon the patient's false ribs. If, at the same time, the fingers of the operator grasp and squeeze the false ribs towards each other, these combined actions crowd the false ribs upwards and inwards, producing the greatest possible motion of the diaphragm and displacement of the contents of the pulmonary air-cells. The operator then suddenly lets go and returns to the erect position upon his knees, when both the in-rush of air, and the natural elasticity of the ribs at this part, cause instant return to their normal position. This, repeated with proper rhythm and frequency, constitutes the entire process.

"This direct method possesses, in my opinion, the following advantages over and above the *indirect methods*, both of Silvester and of Marshall Hall, at first published in pamphlet form by your honorable Board :

"1st. It is more simple.

"2d. The degree of compression is felt, and can be regulated by the operator.

"3d. All the available anatomical means for displacement of air in the cavity of the chest are completely used.

"4th. While the necessary motions are in progress the tongue may be steadily held out, the limbs and entire body be dried and rubbed without interfering with the operator.

"5th. No time is lost in superfluous motions.

"6th. It is less fatiguing to the operator.

"7th. It is more quickly taught to a bystander."—*Medical Record.*

Sciatica Treated by Acupuncture: By T. J. STEVENS, M. D., Charlestown, Mass.

BELIEVING that acupuncture has nearly fallen into oblivion, I cannot forbear recording an interesting case of sciatica in which I successfully tried this method.

A gentleman alighted from his carriage with great difficulty and in extreme pain, and limped into my office. He had long been suffering from unilateral sciatica, which had proved rebellious to ordinary remedies. Having determined on the application of acupuncture, I selected twelve fine steel needles, which I inserted in the direction of the nerve along the ischio-trochanteric fossa. After stretching the skin tense with my left hand, I seized a needle by its head, and, holding it at an angle of 45° , passed it through the skin about half an inch, in a boring or rotatory manner. All the needles were successively applied and left in place half an hour, when they were extracted in the same rotatory manner. I now requested the patient to get up and

walk, well knowing that when acupuncture is going to do good the benefit is generally immediate. To his astonishment, he rose and walked with ease and without pain. The cure was radical.—*Boston Medical and Surgical Journal.*

Operation for Stricture of the Urethra.

AT a recent meeting of the Medical Society of the County of New York, Dr. Wood described an operation which he had for some years been performing, and of which he had seen no mention in the practice of other surgeons. Cutting down, after Syme's plan—a staff being fixed at the distal end of the stricture and a slender bougie being also, if possible, passed into the bladder—he had found that, as he approached the urethra by slow and cautious dissection through the fibrinous deposit, the stricture would gradually yield, until, without entering the canal or wounding the mucous membrane, he could by degrees press the staff on towards the bladder. This mode of relieving the stricture answered to the operation for strangulated hernia without opening the sac. He had repeatedly performed it successfully; he had also repeatedly failed, and been obliged to cut into the urethra, as would always be the case in traumatic stricture, or in idiopathic where the mucous membrane was much diseased. But it was always worth trying, for where applicable it offered the great advantage of rendering urinary infiltration an impossibility. And to such infiltration and the pyæmia consequent upon it were to be ascribed most of the fatal results of perineal section.—*Medical Record.*—*Boston Medical and Surgical Journal.*

Large Salivary Calculi. *

OUR esteemed correspondent, Dr. H. E. Van Rygersma, of St. Martin's Island, West Indies, has sent us some remarkable specimens of salivary calculi. Two of them are as large as lima beans. They were taken from the mouth of a negro woman about fifty years of age. The first calculus was extracted by a French surgeon, and was the size of a pigeon's egg. The excretory duct of the submaxillary gland, Dr. R. describes as completely changed into a bag, and will readily admit a grain of corn. This keeps up the tendency to calculous deposit, and Dr. R. has taken them out at three different times within the last eighteen months.

Such specimens are among the rarities of pathological cabinets.
—*Medical and Surgical Reporter.*

Remedies for Snakebites.

PROFESSOR HALFORD, of Melbourne, has recently been experimenting upon dogs in pursuance of his researches on the subject of snakebite. He has demonstrated very satisfactorily the good effect of injections of ammonia into the veins. His example has been quickly followed, Dr. Dempster, of Beeckworth, having by this means brought about the recovery of a man who was bitten by a black snake. Dr. Dempster injected altogether into the saphena vein about twelve minimis of the liq. ammoniæ fortior.—*Medical Press and Circular.*

Fatal Attempt to Reduce an Old Dislocation.

A MAN, twenty-nine years old, was received at the Pitié Hospital of Paris, on the 13th of May last, with dislocation of the hip, of seven months' standing. M. Broca attempted to reduce it, using a force of 480lbs. No reduction was obtained, and the patient insisted upon leaving the hospital five days afterward. A fortnight then elapsed, when he presented himself at another hospital, with the hip enormously swollen, and died the next day of peritonitis. The autopsy showed that the head of the bone lay in the ischiatic notch, that it was held firmly by bundles of the torn capsule, and that the cotyloid cavity was much shrunk. Pus was found in the capsule, in the iliac fossa, in the articular cavities, and had found its way into the peritoneum, through the obturator foramen.—*Medical Record.*

Note on the cure of Acute Orchitis in twenty-four hours. By FURNEAX JORDAN, F. R. C. S., Surgeon to the Queen's Hospital, Professor of Surgery at the Queen's College.

It is gratifying to me to know that Mr. Noble Smith has found "most satisfactory" results (British Medical Journal, Jan. 30th) from the treatment of acute orchitis which I described at Oxford. May I suggest that still better results may be obtained by using a solution of nitrate of silver and applying it *immediately* the cases present themselves?

In very acute cases, I add a little vesication over the femoral artery of the same side. This is the treatment, as seen in a severe double orchitis treated in my absence, and reported to me by a correct observer, our house-surgeon, Dr. Jolly. A man, aged 30, had intense pain, intolerable tenderness, and great swelling and induration, in both testicles, and could not stand upright. The scrotum was covered with a solution of nitrate of silver (two

drachms to an ounce;) a stripe of vesication was established over the upper halves of both femoral arteries by means of linementum iodi ; and the testicles supported with cotton-wool. He was well in twenty-four hours.

The treatment of orchitis is of more than ordinary importance, from the discovery by Dr. Marion Sims that closure of the vas deferens from acute orchitis is a common cause of sterility—often where the blame is laid to the wife.

The return of some urethral discharge is best removed, often in a few days, by maintaining, with iodine, a disc of milder counter irritation, the centre of the disc being the genital organs. On this principle I treat all inflammations of the genito-urinary organs, male and female ; adding, in the acute form, a little vesication on the sheltered position of the femoral arteries.

The above treatment of orchitis is simply an illustration of a new system of treating all inflammatory diseases, and which I constantly adopt in all, with a success proportionately as great as in acute orchitis. A brief sketch of the system appears in the February *Practitioner*.—*British Medical Journal*.

MALIGNANT PUSTULE.—Z. S. Booth, M. D., of Jersey City (*Boston Medical and Surg. Journal*), has tried the common modes of cure in malignant pustule, and is fully satisfied that the only beneficial treatment is that which withdraws the poison from the system, and arrests the progress in the early stage. He applies leeches directly to the pustule, and if applied early they will effectually arrest the disease ; if one is not sufficient, a second one is applied. The bleeding should be allowed to continue for some hours, although the pain and swelling will almost immediately cease. If the disease has been allowed progress to an advanced stage, no local applications are of any benefit ; cutting is out of the question. The treatment should consist in the administration of tonics and stimulants.—*Medical Record*.

Dislocation of the Tendon of the Peroneus Longus Muscle : Ry T. B. CURLING, F. R. S., Surgeon to the London Hospital.

A young gentleman, about twenty-one years of age, in May last met with an accident in jumping, by his left foot slipping on a stone and turning outwards. He felt considerable pain in the ankle, became lame, and sensible of something being wrong. On taking off his boot, he found a projecting cord at the outer and front part of the ankle ; this he easily pressed back, with instantaneous relief. In the course of the following week, the displacement recurred twice ; and the patient sent for Mr. Bailey, a surgeon at Wansford, who at once ascertained the case to be a dislocation

of the tendon of the peroneus longus muscle. He applied an angular piece of cork to the margin of the fibula, so as to prevent the tendon from slipping over it; and confined this with a bandage. A few days afterwards, the patient called on me, when I found the tendon in its usual site rather more prominent than usual. The cork pad was reapplied, and kept in place with strapping and a bandage and walking exercise forbidden. After a few weeks, I had a laced-up ankle-support, with a pad to fit behind the fibula, made; and he was then allowed to move about, and he shortly returned into the country. He paid me a visit in December, seven months after the accident. He stated that the tendon had kept in place; but he occasionally felt a weakness in the part, and a sensation as if the sinew was not secure, especially in walking on rough ground. He was about to emigrate to Australia. I recommended his continuing to wear the laced-up sock and pad for some years.

Dislocation of the peroneus longus tendon is so rare an accident, that the particulars of a case are worthy of record. Two or three of my professional friends state that they have met with it, but I have no recollection of having read any account of it in books. The nature of the case can readily be recognized, and the tendon can be easily replaced behind the fibula. The great difficulty is to keep it there after rupture of the sheath, as the tendon so readily slips forward in the movements of the foot, which at once gives rise to lameness. This has caused so much annoyance, that it has been proposed to divide the tendon subcutaneously. In the above case, the tendon had been retained in place many months by great care on the part of the patient, who fully appreciated the difficulty of the treatment, and never moved about without the support of the bandage.—*British Medical Journal*.

Some Remarks on Death from Haemoptysis—a Case of Aneurism of the Pulmonary Artery. (Under the care of Dr. BIRKETT.)

AN interesting case of this kind occurred in Victoria-park hospital, in a patient under the care of Dr. Birkett. The following are the particulars:—

Thomas G., aged forty, a commercial traveller, was admitted November 6, 1867. Mr. Power, the resident medical officer of Victoria-park hospital, recognized the patient as having been in Bartholomew's hospital in November, 1864, suffering from bronchitis. A week before he was admitted as in-patient he had attended as an out-patient at Bartholomew's hospital for fractured rib. He was discharged from this hospital apparently much relieved. He was admitted into Victoria-park hospital during the summer of 1866 suffering from phthisis complicated with bronchitis. He improved, and was discharged from Victoria-park hospital. He was a second time admitted November 6, 1867. At

that time there were well-marked physical signs of phthisis, also of bronchitis. The bronchitic râles were most marked over the left lung. On December 11—that is, thirty-five days after admission—he spat blood rather freely. The haemoptysis subsided to a great extent in three days, but his sputa remained tinged with blood. His breath continued very short. On the night of December 18 he had profuse haemorrhage from the lung; the blood gushed out of his mouth, and he fainted. Mr. Power saw him, and he was in deep syncope. Cold water was dashed in his face, friction applied over the heart, and after about half an hour he began to revive, although slowly. After this he passed a fair night. Next day, the 19th, he had rallied, but in the afternoon he had again free haemoptysis. He appeared very much weakened by the loss of blood, but he passed a tolerably good night. On the morning of the 20th he had another attack of copious haemoptysis; after this he rallied for a few hours, but in the evening of the 20th he had a rush of blood from his mouth, and died.

Mr. Power said that after the profuse haemoptysis on the 18th, as soon as the patient's circulation became fully established, haemoptysis returned.

The autopsy was conducted by Dr. H. G. Sutton, and an abstract of his report is here given very briefly:

At the junction of the upper with the middle third of the right lung, in the posterior and outer part, the pleuræ were very much thickened and adherent. On cutting through the thickened pleuræ into the lung, a cavity was seen, situated about one-sixth of an inch from the surface of the lung. This cavity was about the size of a pigeon's egg; it was enclosed by a thick, tough fibrous wall, and filled with coagulated blood. On removing this large black clot, a portion of the coagulum was noticed to be decolorized. This portion was situated over what appeared to be the mouth of a large vessel. This ruptured vessel, in the shape of small sac, projected from the anterior wall of the cavity, and it was plugged by a clot part of which was decolorized; another part was not decolorized, simply black coagulated blood. A probe was passed into the sac, and with a little care it was passed into a good-sized branch of the pulmonary artery; the latter was large enough to admit a good-sized quill pen. It was therefore clear that there was an aneurism of the pulmonary artery which had burst, and fatal haemorrhage had ensued. The bronchial tubes of the right lung were filled with blood, and there was blood in the tubes of the left lung also, but not so much as in those of the right. Some tubercles were observed in the upper lobe of the right lung. A large cavity was seen in the upper lobe of the left lung, also scattered tubercle in this lung. There was no aneurism in the wall of the cavity that was situated in the left lung. The rib corresponding to the thickened pleura was examined; its surface was uneven and thickened.

It is interesting to notice that the source of the haemorrhage was situated in the lower portion of the right lung, and it would appear probable that this patient's fractured rib had wounded his lung, and, circumscribed pleuro-pneumonia having been thus set up, great thickening of the pleura and a cavity in the lung followed.

This case is also clinically very instructive, for apparently the rupture of the aneurism was not followed by immediate death. On December 11 he spat blood rather freely, and although this subsided to a great extent, it did not completely do so. Seven days after this there was profuse haemorrhage, which returned more or less every day until he died. The patient lived, therefore, nine days after the first appearance of the haemoptysis; and two days after the first profuse haemorrhage from the lung. The ruptured mouth of the aneurismal sac was seen to be partially plugged by a decolorized clot, which would also tend to show that the sac had ruptured some hours, a day or two, or maybe nine days, before death. The fatal haemorrhage in this case was like what is frequently seen when aneurisms of the chest and abdomen open on mucous surfaces; it was preceded by minor haemorrhages. And experience in such cases has shown that there may be gushes of blood for several hours, days, or even weeks, before the fatal discharge takes place.

Dr. H. G. Sutton mentioned to us that, in 1859, a male, aged forty-four, died of haemoptysis in this hospital, and aneurism of the pulmonary artery was found also. In 1860, a patient died of haemoptysis in the hospital, and a similar aneurism was discovered. The last-named case was that of a male aged twenty-nine. In the upper lobe of the right lung was a cavity about the size of two walnuts; it was filled with a clot of blood, and in the wall of the cavity was found a vessel ruptured, and its mouth was stopped by a clot. There was tubercle in other parts of this lung.

In the post-mortem records of this hospital was also noticed an account of another patient who had died of haemoptysis. A sailor, aged thirty-nine, was in the hospital in 1863. There was no tubercle in the lungs, but one of the tertiary branches of the right bronchial tubes was adherent to the diaphragm, and it communicated with a large abscess in the right lobe of the liver. A few weeks ago a patient died in the hospital of haemoptysis, and there was no tubercle in the lungs. The left lung was much wasted; it weighed only thirteen ounces, and was otherwise healthy. In the right lung the bronchial tubes were exceedingly dilated in a uniform and saccular manner. There was no tubercle in either lung. We may here be allowed to mention that Dr. Grainger Stewart, in his excellent essay on "Dilatation of the Bronchial Tubes," states that Barth met with two cases of dilated bronchial tubes in which haemoptysis proved fatal. Dr. H. G. Sutton, speaking of haemoptysis, said it is exceedingly common,

as is well known, for patients suffering from phthisis to spit blood, but very few indeed die of haemoptysis. During the last eleven and a half years sixteen patients have died of haemoptysis in this hospital, and during that time three hundred and twenty-one patients have died in the hospital of phthisis, so that very little more than five per cent. of those laboring under and dying with phthisis have suffered from fatal haemoptysis while in the hospital. It is very instructive to notice that all but two of these sixteen patients were males, and this bears out what Dr. Walshe has said respecting the greater liability of males to suffer from profuse haemoptysis (*vide* work "On Diseases of the Lungs," p. 448, third edition). He says very profuse haemoptysis from the lungs is more common in males than in females. Dr. Walshe, moreover, states that the percentage of haemoptysis of all amounts in cases of phthisis is 80.92, and it is stated by Dr. Sutton that very little more than five per cent. of those laboring under phthisis, and dying while in the hospital, had fatal haemoptysis, which evidence tends to show that death from haemoptysis in persons suffering from tubercular phthisis is, in comparison with the number who spit blood, very rare.—*Medical Times and Gazette.*

Case of Inoculation of Syphilis from a Bite on the Cheek. By F. R. Sturgis, M. D., New York.

THE following case, which entered Dr. Bumstead's service, in the Charity Hospital B. I., and through whose kindness I report it, is of great interest, showing, as it does, an unusual manner for the entrance of the poison into the system.

John Fagan, an Irishman, aged 38 years, entered the hospital Nov. 9th, 1868, with the following history: In July, 1865, he had two ulcers upon the penis, which were followed by *no eruption*. He had, also, at that time, a swelling in one groin, but this was unattended with any suppuration.

In April, 1868, he had some difficulty with a man, and was bitten by him on the left cheek. This man, he knew, had an ulcer upon his penis, and eruption over the body. The wound caused by the bite healed up in two weeks, but two weeks after its cicatrization a "scab" appeared upon its site, which was painless and indolent. At this time, a submaxillary ganglion of the left side became indurated.

One month after the appearance of this scab, a papular eruption came out over the arms and legs, and upon the scalp. at the time, or a little later, he reports having had a sore throat.

On examination, a cicatrix is apparent over the malar bone of the left side of the face, unaccompanied with any induration. The submaxillary ganglion is still indurated and enlarged. On the

penis, no cicatrix could be seen. Neither were there any indurated glands in the groins.

Scattered upon the legs and buttocks were the remains of a recent pustular eruption, some of which had been covered with crusts.

In his remarks upon the case the Professor said that all such stories should be taken *cum grano salis*, but that here the patient an intelligent fellow, had told a straightforward story, and, moreover, had furnished the dates of the incubation of the primary ulcer, and the time elapsing between the primary and secondary symptoms, in accordance with our knowledge of the disease; and when we reflect that he was very likely ignorant of the semeiology of syphilis, these facts add strongly to the truth of his story. Besides, the physical signs accorded with his statements.

That his previous ulcers, contracted in 1865, had anything to do with his present disease is impossible. These ulcers were not followed by any eruption upon his body, which would certainly have occurred within the thirty-three months that had elapsed, had they been true chancrea. Again, had they been such, the present eruption would be different in its character, corresponding to an older stage of the disease, and not, as it is, indicative of the early secondary stage. It is, therefore, fair to consider them chancroids.

A case similar to the present one was reported by Rollet, and as it is an interesting one, I shall quote it in full:

"Jules C., a weaver entered the Antiquaille Hospital, Lyons, June 26th, 1858. He had never had any venereal disease until April 11th, preceding, when he was bitten upon the upper lip by Louis B., and the wounds produced by the aggressor's teeth remained open for two months.

"At his entrance into the hospital, two masses of induration were found in the upper lip, each of which nearly equalled in size a twenty-five cent piece, and was slightly excoriated upon the surface. The submaxillary glands on each side were enlarged and indolent.

"He had had, for several days, scabs upon the head, alopecia, erythema upon the body, and mucous patches upon the scrotum, nothing upon the penis.

"His wife presented no trace of syphilis, and was nursing at the time a healthy infant.

"Louis B.—, who bit him, and who was condemned for the act to six months imprisonment, had been treated for general syphilitic symptoms at the hospital, which he entered April the 10th, 1857, when, as shown by the records, he had an indurated chancre of the corona glandis, which healed up at the end of three weeks. He had afterwards mucous patches upon the scrotum, engorgement of the posterior cervical glands and alopecia, for which he remained under treatment until May the 8th, when he left the hospital.

"At the time he seized Jules C—— between the teeth, he had syphilitic lesions in the mouth, and told the latter, as he bit him, that he would give him the pox."

The following case is reported in the *Lancet* for April 25th, 1868, by Mr. Bryant, Assistant Surgeon at Guy's Hospital :

"William H——, æt 22, came to me at Guy's Hospital, Nov. 17th, 1866, with a large chancre on his left cheek, with an indurated base of nine weeks duration.

"It appeared after a scratch he had received from a fellow-laborer who had syphilis. The cervical glands on the left side were much indurated.

"On December 15th, maculae appeared over his face and body, and sore throat manifested itself.

"With quinine and iodide of potassium all the symptoms subsided. On February the 4th, the chancre had healed; and on the 18th of March every other symptom had disappeared."

Now, it is not capable of demonstration that the man who bit our patient had secondary lesions in the mouth, but the fact of his having an eruption upon the body, renders it highly probable that he was affected with mucous patches in the buccal cavity, and that from them the patient was infected.

One other point is worthy of note; although the cicatrix was unattended with any induration, and that might well be, considering the time which had elapsed before he came under observation, the indurated sub-maxillary gland was still appreciable to the touch, and this gains additional importance when it is borne in mind that the inguinal ganglia were unaffected, since it shows that the virus entered the system in its neighborhood.—*Medical Record.*

QUARTERLY RECORD OF PRACTICAL MEDICINE.

COLLATED BY S. M. BEMISS, M. D., PROF. OF PRACTICE OF MEDICINE, ETC.
UNIVERSITY OF LOUISIANA.

Acute Arthritic Rheumatism Treated with large doses of Opium:
By W. R. SAMPLES, M. D., Assistant Physician, City Hospital, St. Louis, Mo.

JOHN FALK (colored), a house-servant, aged sixteen, was admitted to the hospital, Sept. 28th, suffering from a highly acute attack of rheumatic fever, with a high grade of arthritic symptoms. He had been suddenly attacked, a few days previous, whilst engaged in his usual avocation. When admitted, his condition was as follows:—Pulse, 110; skin harsh and dry, with the most excruciating pains, seemingly in every joint; the heart symptoms

indicated pericarditis with effusion; bowels constipated (no movement during preceding forty-eight hours); urine dark colored, and loaded with urates, with a strong odor of turpentine, a large dose of which had been administered by his employer. By direction of Dr. Clark, the resident physician, he was immediately ordered a full dose of sulphate of magnesia to unload the bowels, and a grain of opium every hour to relieve the pain, which seemed almost intolerable. For ten hours he obtained no relief from his sufferings, but then fell into a comparatively quiet slumber, which lasted about three hours, but upon awaking his pain was aggravated to such extent that he was unable to bear even the weight of the bed clothes. The opium pills were now renewed and continued for forty-eight hours, the nurses watching him with great care all the time, when, very little sleep having been protracted, and the pains continuing most intense, at the suggestion of Dr. Clark, the opium was ordered to be increased to two grains every hour, to be continued until narcotism was produced or relief afforded, (the nurses giving him constant attention,) and then diminished or discontinued at intervals, or entirely, as his condition justified or required. When he was fully under the influence of the drug, it was omitted for intervals of from two to four or five hours, but immediately renewed upon indications of returning pain, and it was not until the large amount of 340 grains had been administered that entire and permanent relief was effected. Throughout, his face and lips were much swollen, and the latter were so completely denuded of epithelium that they presented much the appearance of raw beef; the tongue was dry and red, and his appetite so impaired, that the only nourishment he would take was a very small amount of crackers and tea.

Save the occasional administration of sulphate of magnesia, to keep the bowels open, he took no other medicine than opium until all pain and inflammatory symptoms had ceased, when, being very emaciated, he was put upon tonics and beef-tea, and on the tenth day after the subsidence of the pain, he was able to sit up in bed. At this time (Nov. 20th) he is quite convalescent, and is rapidly regaining his normal strength and flesh.

The case is remarkable, both in the tolerance of such large and continuous doses of opium, and in evincing the happy effects of this drug in a rheumatic fever presenting such marked heart-symptoms, and intense and general arthritic trouble.

I have also treated, successfully, five other cases of rheumatism in the same manner, but neither of them of such severity, and therefore, of course, getting a much smaller quantity of opium.
—*Humboldt Medical Archives.*

Treatment of Cholera Infantum.

I know of no remedy which is better retained and puts a stop

to the incessant vomiting of cholera infantum sooner than often-repeated teaspoonfuls of mint julep. Cold water and ice ought to be allowed *ad libitum*, and no regard should be paid to their immediate rejection by the stomach, for the soothing effects obtained and the relief they give will soon become apparent. Sinapisms and irritating embrocations to the epigastrium I consider worse than useless. But soft woolen cloths, wrung out of warm water and wrapped around the child from the axilla to the toes, I found to be grateful to the little patients, and to promote in a short time a healthful reaction. From two to five grains of the subnitrate of bismuth every two hours will be soon retained by a child under two years of age. The dark stools, of much less frequency, show that the medicine does good. The property of bismuth, of adhering tenaciously to mucous membranes, makes the drug very serviceable as a topical sedative, besides the constitutional medicinal effects which it is believed to exercise on irritated and congested mucous surfaces. In the protracted forms of diarrhoea, and especially in cases accompanied with much pain, this property of bismuth has the additional advantage of enabling the physician to combine with it Dover's powder in smaller doses than it is indicated; for the entanglement of the opiate with the bismuth allows of its longer retention, and consequently fuller absorption by the stomach, nor is it so apt to cause nausea, when thus combined, as when given alone. The timidity of administering opiates to very young children I do not share, and I can add my testimony to the highly beneficial effects often derived from them in the obstinate diarrhoeas of children. When emaciation begins to show itself, the mild ferruginous preparations as first recommended by Dewees can safely be given. I give the preference to the following prescription:

Rx Ferri et Ammoniae citratis, 3 ss.
 Tinct. Columbae,
 Tinct. Nucis Vomicae, } aa. gtt. xxx.
 Sacch. albæ, 3 iij.
 Aquæ, 3 iij.

M. et Sig. Give a teaspoonful three times daily for a child between one and two years of age.

Frequent tepid baths and persistent sponging of the head and abdomen, when these parts show any increase of heat, do excellent service.—*New York Medical Journal.*

Treatment of General Dropsy by the Hot Bath. By Dr. LEO, Bonn. [Sitzungsber. d. niederrhein. Gesellschaft in Bonn. 1867. From St. Louis Med. and Surg. Journal, Sept., 1868.]

THE case reported is that of a girl, æt. 13. She had, three years previously, suffered from articular rheumatism, and since then had been attacked every winter by difficulty of breathing, which

received no treatment, however. In May, 1866, she received a fracture of the femur, which healed in six weeks. In Sept., 1866, she complained of chilliness, loss of appetite, and shortness of breath. She grew irritable, somnolent, and the legs swelled. These phenomena increased to such a degree that Dr. L. found her, at his first visit, 7th Nov., in the following state: The dyspnoea compelled her to sit up in bed; pulse 140; impulse of the heart hurried and indistinct; face and hands cyanotic; high degree of general dropsy: hydrothorax, hydropericarditis, ascites, and general anasarca, especially in the labia pudendi and legs; urine contained much albumen; pain in the chest and abdomen, cough and dyspnoea dispelled sleep. A sure diagnosis of the cardiac affection was impossible under the circumstances.

The advice to transfer the child to the hospital was not followed till 8th Dec., 1866. The objective symptoms were unaltered; the debility considerably greater. Patient had now been in bed three months; many remedies had been used in vain. Dr. Leo, therefore, concluded to make methodical use of the hot bath as recommended by Liebermeister and Ziemssen.

On account of the great debility of the patient, baths were not given at once, but the child was "packed" in clothes wrung out of hot water. First packing, 9th Dec., followed by perspiration. At night, subcutaneous injection of 1·6 grain morphine to allay the severe dyspnoea.

10th Dec. Second packing: free perspiration. Both legs discharged fluid by drops from small excoriation.

11th Dec. Third packing. The perspiration in the blanket very uncomfortable, increased the dyspnoea. Injection of morphine,

12th Dec. Bath, 106° F., 15 minutes; followed by woolen blanket. Profuse perspiration. Ordered 1 tablespoonful of infus. digitalis ($\frac{3}{4}$ i— $\frac{3}{4}$ vi) with $\frac{3}{4}$ i Inf. juniperi, four times a day.

One bath daily until 20th Dec. (eight in succession), gradually lowering the temperature to 99° F.; perspirations always very profuse. The dyspnoea diminished, the nights became more comfortable. On the 16th the legs, arms, and abdomen still much swelled, but the chest more relieved; secretion of urine increased. On the 18th the urine was free from albumen. On the 20th the anasarca had left the arms. Digitalis increased to 3 ss in the mixture. Baths henceforward only three times a week, 99° F.; eight baths until 9th Jan., 1867.

On the 22d Dec. the abdomen was considerably smaller; the legs slightly so. Action of the heart quieter; appetite and sleep good. Improvement progressed rapidly, the dropsy disappearing from above downward. On the 25th the water had almost completely left the thighs and legs also; only the feet were swollen to above the ankles. Patient walks about after a treatment of 16 days, having been confined to bed for nearly four months. The last traces of oedema disappeared by the 2d January, and the

patient left the hospital on the 9th. The cardiac trouble proved to be insufficiency of the mitral valve, with stenosis of the orifice and dilatation of the heart. The kidneys, which had suffered considerably, were relieved after the sixth bath.

This case shows that the hot bath, as recommended by Liebermeister and Ziemssen, is a highly valuable remedy in general dropsy following upon chronic disease of the heart with affection of the kidneys.—*New York Medical Journal.*

On the Diagnosis of Scarlet Fever.—By DR. JOSEPH DUGGAN, Athenry, co. Galway.

THERE is, I believe, no disease, in this country at all events, whose appearance in a locality is so much dreaded as scarlet fever, and very justly so, as, for my part, I would almost as soon witness the appearance of Asiatic cholera, as to behold the sad and fatal ravages of this most unmanageable disease, which when it occurs as an epidemic, causes a higher rate of mortality than even cholera itself; of course it is not always the case, but I infer that it does so, as it attacks a larger number of individuals when it spreads as an epidemic—if we calculate the amount of infant, juvenile, and adult mortality, *per se*, of this most dangerous malady, and if we add to this direct mortality the indirect sequelæ of the fever, which very often causes the development of a train of morbid lesions, which induce a fixed and organic disease ultimately ending in the early death, or change the previously healthy constitution of the individual into a state of cachexia, premature invalidism, and decay. Now if all these melancholy and fatal results be summed up together, the mortality will far surpass that of Asiatic cholera: indeed it is a most trying and afflicting malady; it is as fatal in the homes of the rich as those of the poor, because it cannot be warded off even by the most exact hygienic measures.

It is liable only to affect an individual but once, like variola and measles, generally during the infantile adolescent period of life; but no period of life is exempt from its attack, if not previously invaded by the fever. I have seen several old persons die of scarlatina, and on inquiry I found they never had it before; the poison acted so virulently in one of those cases that the patient lived only thirty hours.

This morbid specific poison, which acts on the blood after a definite period of incubation, manifests itself by the appearance of febrile phenomena, inducing the primary fever, which exhibits in a more or less degree great disturbance of the nervous centres, and after the lapse of two or three days the skin is covered with a scarlet efflorescence, and the throat gets tender and painful; of these appearances different grades are to be met with,

in some there is only the rash, and no sore-throat, or we have scarlatina and no scarlet eruptions, in others we have merely the febrile sore-throat. In practice we will frequently meet with those phases of the disease, and even between these we will meet with infinite shades and complications not easy to be studied, except by clinical observation. Often it appears in a hybrid form of measles and scarlatina called "Rotheln," and with rheumatism of the joints, when it is called "Dengue."

In the primary stage of the disease, when it is of the utmost importance to form a correct diagnosis, because anxious parents will very justly have you declare (particularly when scarlet fever and measles are rife in the locality) which is which; here any error in the diagnosis, I need not state, would be hazardous to the doctor's fair fame.

Having had some years ago numerous cases of scarlet fever in all its phases under my treatment, I had therefore ample opportunity of becoming acquainted with the disease in all its forms, and from very close observation I have observed at the very earliest invasion of the disease, a peculiar and constant appearance of the eye, so much so, that at the primary stage I could without difficulty diagnose the disease immediately, even in cases where the skin, tongue, or throat have failed to afford me satisfactory evidence that I had to deal with scarlet fever. I have placed such reliance on the peculiar appearance of the eye, that I regard it as perfectly pathognomonic of the disease. If once observed accurately it can never be mistaken. I am not aware it has been mentioned by other observers, at least I have not met with it in books. This striking peculiarity of the eye I have never observed in other febrile affections. It is characterised by the eye assuming a peculiar brilliant and glistening stare, as if it were glistened by an ethereal lustre; it has only to be noticed once, then never to be forgotten, and can be easily distinguished from the liquid, tender, watery eye of measles. When the skin and throat appearances are absent, and therefore Bouchut's pathognomonic "white line," I have found this appearance of the eye, combined with the "raspberry tongue," highly diagnostic of scarlet fever, and those who accustom themselves to observe it will have a sure and real sign perfectly pathognomonic of the fever.—*Medical Press and Circular.*

The Use of Medicines During Menstruation.

In a work lately published at Paris, by M. Raciborski, the author endeavors to show that the prejudicial effects of remedies used during menstruation have no existence. He considers that our acquaintance with the physiology of this function should des-

troy a prejudice existing both in and out of the profession. M. Raciborski has prescribed emetics and purgatives during the catamenia, and even venesection, without, in the least, disturbing menstruation.

A great point, according to the author, is to explain to the patient that no ill consequences will result from therapeutical interference during the catamenia, as her apprehensions might otherwise prove uncomfortable. Of course, no remedies should be used except they be very clearly indicated.—*Lancet.—The Physician and Pharmaceutist.*

Belladonna in Asthma.

H. SLATER, M. D., F. R. S., recommends the use of belladonna in asthma, illustrating its beneficial effects by the report of five cases, in all of which it proved beneficial ; he gives it in large doses, and until its physiological effects are produced. He gives the tincture commencing in doses of ten minims and gradually increasing. We sum up in his own words, as re-printed in the *Lancet* of January 30, 1869.

The advantages of administering it in the way I have described are :—

1. That, giving it at night, you bring the full force of the drug to bear upon the disease at the time at which it is most liable to come on, and thus, if you are successful, tide your patient over the critical time.

2. By gradually feeling your way up to the required dose, you are able ultimately to reach, without fear, a dose which you would be unwilling to prescribe without such a tentative approach.

2. In those cases in which the therapeutical dose is reached before the physiological—that is, in which the asthma yields before the sight or head is appreciably affected—it enables you to stop short as soon as relief is obtained, and thus spare your patient any of the disagreeable effects of the drug.

4. By giving it only once in the twenty-four hours, you are able to give a larger dose than you would be able to do if oftener repeated.

5. By confining the dose to bed-time, the patient's days are, in spite of a large dose, passed in comfort ; for as the morning advances, the dullness of head, confusion of sight, and drought of mouth pass away.

6. You are thus enabled to find out what is the dose for the individual—a very important point. People differ very much in their toleration of belladonna. Some of my patients have been unable to take more than twenty minims once in twenty-four

hours, without very unpleasant symptoms; while I have known others able to take a drachm three times in the same interval without any inconvenience. And as they differ in their tolerance of the drug, so do they differ in the dose at which the asthma will yield. The only way to ascertain what that dose is, is to make each case a separate experiment, and this can only be done in the way I describe.

7. By giving the remedy three or four hours before the attack is likely to come on, the treatment becomes *prophylactic*. If by taking a dose every night for thirty nights the attacks have been for that time prevented, the patient has ceased to be an asthmatic for a month. This is a very different thing from having had thirty attacks in the same time which have been cut short by the remedy. In all "habitual" diseases, in which the recurrence keeps up the tendency, prophylactic treatment has, in relation to final cure, a pre-eminence it does not possess in diseases in which habit has no place. For such diseases it is *the* treatment. It does more than spare your patient an attack of his malady; it breaks *pro tanto*, that chain of sequences which is the very life of the morbid tendency.—*Dominion Medical Journal*.

Treatment of Typhoid Fever: By E. SHEDD, Esq., Surgeon to the Ardwick and Ancoats Dispensary, Manchester.

GREAT success having this year attended my treatment of cases of typhoid fever, I have thought that possibly a few remarks on my mode of treatment may be not without interest.

My treatment is the following. As soon as there is any tenderness in the abdomen upon pressure, I prescribed drachm dose of glycerine (in the case of an adult), to be repeated three times a day. Under this treatment, the temperature gradually subsides, becoming normal towards morning, and rising to 99° Fahr. towards evening. The secretions soon improve; a profuse perspiration frequently prevails; diarrhoea is quickly checked; and the patient becomes convalescent.

Of the numerous cases which have come before me in my practice, I have treated twenty-seven in the manner described, and with complete success, as not a single death from typhoid fever has occurred—a fact which, as it seems to be, is the more remarkable, as I have much reason to believd that the disease has been of a more virulent type than usual, because I find, from my own observations and the information of others, that fevers of the typhoid class have been this year more than usually prevalent, at least in Liverpool, Manchester, and Salford.—*British Medical Journal*.

Effects of the Bromide of Potassium in Laryngismus Stridulus. By
B. F. DAWSON, M. D., Lecturer on Uterine Pathology in the
Medical Department of the University of New York.

THAT the bromide of potassium is a valuable remedy for many diseases having their origin in some affection of the nervous system, is acknowledged almost universally, but that its power has been greatly overrated, and its utility in some diseases based upon mere hypothesis, is also a fact which cannot be denied. In view of these facts, therefore, it is advisable to be cautious in pronouncing upon its merits in the alleviation of certain affections, and it is only after repeated experiments with it alone on any one individual, or type of disease, that we can feel assured as to its merits. Enough, however, is known of its effects to enable us to rely upon it as a valuable remedy in certain diseases affecting the cerebral centres, and those due to increased reflex action.

It was on account of this acknowledged power which it possesses over spasmodic affections that I was induced to use it in the following case of *spasm of the glottis*.

About the 10th November, 1868, a little boy not quite four years old, was brought to me by his mother, suffering from what she thought must be "croup." She stated, on interrogation, that about six months ago she first noticed that her child would occasionally be seized, whilst asleep, with a difficulty in breathing, which would last but a few moments, and then the child would sleep as naturally as before. These attacks occurred in the beginning about once or twice a week, and remedies which she used gave no relief whatever; for at the end of four months the attacks had increased in frequency and severity, and often she thought the child would choke to death. During these attacks he would jump up in bed and stretch out his neck in his efforts to obtain breath, and his breathing was so loud as to be heard throughout the house. The spasm generally lasted but a few minutes. In this state he continued up to the present time, the paroxysms returning nightly for the last month, and no relief being obtained from the remedies used. In other respects, the child was quite well; he eat regularly, and was only allowed simple nutritious food, as had been ordered by her physician. His bowels were regular, and in the daytime he was as playful and bright as any child of his age. Examination of the child's head, chest, throat, mouth, etc., revealed nothing to account for the disease, and I therefore considered the case one of "spasms of the glottis," due to some one of the many nervous influences which sometimes give rise to this affection, but as to what was the particular influence inducing it, I was unable to discover. With this opinion as to the disease and its cause, I was desirous of trying what effect the bromide of potassium would exert over these paroxysmal spasms, and accordingly, to this end I ordered the child 10 grains of the salt every hour, from 8 to 10 P. M., the same dose

to be repeated at the same hour for three nights, at the end of which time the child was again to be brought to me. I was not a little surprised to learn at the end of this time that the child had not the slightest return of the "spasm" from the first night the bromide was taken, and that its sleep and breathing were exceedingly easy. As the disease was evidently impressed by the prescribed treatment, I directed a continuance of the salt in the same doses for two nights more, after which time but one dose was to be given on going to bed, for two nights only, and the medicine was to be dispensed with altogether. These directions the mother carefully followed, and for the last five nights the child has had no medicine whatever, but notwithstanding has not had the slightest return of the disease.

From the foregoing facts it is therefore evident that in this case the bromide of potassium certainly must have the credit of at least temporarily relieving an obstinate and dangerous affection, and although it is not safe as yet to consider the disease as cured, yet I may safely believe the paroxysms have been completely broken for a time at least, by its action, and there is all likelihood that they will not return for some time; and when they do recur I may confidently rely upon the bromide of potassium as a powerful means for at once warding them off. The interest attached to this case is, that I do not know of any case of laryngismus stridulus in which the bromide of potassium has been used, and that consequently we may possibly find it a valuable agent in this disease; and as this salt is known to be efficacious over certain spasmotic or reflex actions, may not this disease, when due to nerve lesions, be made to yield under its judicious and persevering use? Its power, at least, is worth trial, and the above case I shall watch carefully, and rely solely on the bromide of potassium so long as I find it makes an impression on the disease.

It may not be out of place to mention that Dr. J. Russel Reynolds (*The Practitioner*, July, 1868), in a paper on the use of the bromide of potassium in spasmotic affections, says: That its efficacy is most marked when the malady is "paroxysmal;" and, according to Dr. Pieter's observations, (*Deutsche Klinik*, No. 10, 1868), "it excels all other drugs as a remedy for spasms and excessive reflex action of the nervous centres."

It may be quite probable that the effect of the bromide of potassium in the case cited above, was simply due to the *anesthesia* it produces when given in large doses, as was done in this case, and not to any direct impression on the cerebral or ganglionic system.—*American Journal of Obstetrics.*

Atomized Medication for Asthma: By M. F. BASSET, M. D., of Quincy, Ill.

SOME experiments which I have recently made in the treatment of this distressing malady, by means of the atomizer and the inhalation of medicated spray, have been so satisfactory to me and my patients, that I feel justified in asking the attention of the profession to this plan of treatment.

The hand atomizer of any manufacture, that throws a continuous and copious jet of spray, answers every purpose, and is more convenient in general practice than the more complicated and cumbersome "nephogene." With these instruments, as is generally known, any liquid or medical substance in solution, can be applied directly to all parts of the air passages or respiratory organs. Various medical agents by this method are appropriate to asthma, but I have gained the best results from a combination of antispasmodics and expectorants. In the four cases which I subjoin, the following formula was employed:

Rx Ext. hyosiam, fl.
 " lobeliæ, fl. $\frac{1}{2}$ f. $\frac{3}{4}$ j.
 Aqua dest. f. $\frac{3}{4}$ j. M.

Case 1st. A merchant, æt. forty, has suffered from childhood more or less—the past six years a great deal, seldom being able to lie in bed all night, especially in autumn. Was called to him at night of August 15th, '68. Found him in an unusually severe paroxysm and nearly unconscious from the effects of chloroform inhalation, having used four ounces of this anaesthetic during the day and evening, with only slight and transient relief. The spray gave him perceptible relief in ten minutes. Leaving the atomizer with directions to use it for four or five minutes at a time every hour, or oftener if necessary, I returned next day to find my patient breathing easily, looking comfortable and feeling greatly refreshed from eight hours' sleep that he had enjoyed, in the morning. The spray was continued at intervals for the next three days and no other medication employed, except a cathartic at my second visit. No more sleep was lost nor distress endured, and when I discontinued the treatment he informed me that the last three days and nights had been passed more comfortably than the same length of time during the last six years. Have not seen the case or had any further report since.

Case 2d. A young man of about twenty-five years of age came into my office August 20th laboring under so severe an attack that he had walked three blocks with the greatest difficulty and could not speak for several moments. His respiration, cyanosed and distressed expression, gave a correct knowledge of his affection, and as soon as he was seated, without waiting for him to tell his story, I commenced to give him the spray. In less time than it requires to write it, he began to inspire easier and in half an hour was breathing and talking with ease. He informed me

that he was a stranger, bound west to find a place where he could be exempt from the suffering he had endured on the sea shore from his childhood—that he had been detained here for a week on account of the present attack and that the night previous one of our most experienced medical men had been with him for several hours making fruitless efforts to relieve him. He came to my office morning and evening for several days and used the spray for an hour at intervals, suffering but little by night or day and then went on his way rejoicing.

Case 3d. An old gentleman about sixty years of age, whom I have known as an asthmatic for several years, living on a farm three miles from town, dispatched a messenger for me in haste late in the evening of August 24th. I found him in a frightful paroxysm, with all the symptoms of extreme distress and suffering. As speedily as possible the spray was administered, and in half an hour he fell into a quiet and refreshing sleep, for the first time in nearly a week. I left him a cholegogue cathartie with directions for him to take it when he should awake, also the atomizer and directions for its use. The next evening found him comfortable with the gratifying report that he had slept and rested quite comfortably, and had no distressing paroxysm since the previous visit. Prescribed five grains of quinine to be taken every morning, and half a grain of podophylin every evening, and to continue the spray at intervals for four days and then to report at my office. At the appointed time a neighbor returned the atomizer with the report that the old gentleman was perfectly relieved and at work as usual. I have seen the patient several times since, and he informs me he has been entirely free from asthma ever since, now nearly three months, and that he sleeps comfortably upon a feather bed.

Case 4th. A prominent citizen of this place, about fifty years of age, who has suffered more from asthma and obtained less benefit from the usual treatment, for the past eight years than I have been acquainted with him, than any other asthmatic I ever knew, called on me Sept. 17th on account of an unusually severe paroxysm. The spray relieved him promptly, and instead of being confined to the house for several days as always heretofore with similar attacks, the next day he was able to go to his office and attend to ordinary business. He used the spray for several days occasionally, experienced great benefit from it, says nothing else has ever given him such prompt and decided relief, and thinks it has permanently improved his condition, as he has since been exempt from a severe paroxysm. He formerly lived in one of the Eastern States, where he had suffered so much from this complaint that he came West hoping to find relief from change of climate. The change benefited him for a time but not permanently. Since residing here, in addition to your correspondent, several of our most experienced physicians have exhausted their skill upon him in vain. He smoked arsenic

and saltpetre, inhaled chloroform and ether to an alarming extent taken anodynes and stimulants, had hypodermic injections in great number and varities, used every nostrum and measure ever conceived of for this malady, and never found even a reliable palliative till the spray was resorted to. I believe that a few months hence this case will afford still stronger evidence of the efficacy of the new plan of treatment.—*Medical and Surgical Reporter.*

Obscure Case of Pleuritis and Effusion.

Dr. WILLIAM MOORE said, the specimen he now exhibited was taken from the body of a man admitted to Sir Patrick Dunn's Hospital, on the 11th December. The history he gave of his case was as follows:—He was a car driver, and was in the habit of drinking fifteen or sixteen glasses of whisky in the day, besides a few pints of porter. He was a man of about fifteen stones weight. In the month of May he slept in a damp bed, and got pains in his chest, and cough and rigors, which laid him up for a week or ten days. At the end of that time he resumed his occupation; but he found on jumping on a car or walking up a hill his respiration completely failed him, and he was obliged to give up his business as car driver. He spat blood twice, but in very small quantities—once in July and again in September. He got extremely weak, and decreased in weight to ten stones; he suffered from profuse night sweats, from great asthma, and from loss of appetite. He also complained that the great toe became painful, but after a time the pain left the toe and fastened upon the ankle-joint; he was not able to sit up or move through the wards. He complained particularly of the night sweats, which were most exhausting. On stripping him, the left clavicle was manifestly lower than the right. On taking a deep inspiration he could not move the left side as well as the right. On placing the hand over the left side vocal vibration was altogether lost; it was feeble over the right. The man was not aphonic, but his voice was of a low subdued tone. On percussion he was found to be dull from the left clavicle in front down to the base of the left lung; and there was also dullness from the left scapular ridge behind to the base of the same lung. The left side was an inch smaller than the right. The opposite lung was normal as regards percussion and auscultation. The stethoscopic sounds over the left side were extremely feeble—indistinct respiration was audible over the base of the lung, sometimes accompanied by a small crepitus. The man made no complaint of pain; his pulse ranged between 90 and 100; he had a total loss of appetite. The pupils on both sides were equal; there was no deformity of vision, no ptosis; he did not complain of dysphagia, but he had dyspnoea, except when lying

on his back, which was his invariable posture. All these symptoms would tally with chronic pleuritis. There was nothing in the history of the man which would point to tubercular disease, nor had he the aspect of it. He was a well-colored man, but he had this great emaciation—wasting night sweats, asthma, cough, falling in of the left side, dullness on percussion, and all these symptoms, according to his own statement, dating from a particular day. The explanation arrived at was that he had pleurisy with effusion; that the dullness over the top of the chest was due to the pleuritic adhesion, that the fluid had disappeared after the lapse of some time, and that the side had fallen in. The cardiac sounds were perfectly healthy. There was no bruit or increased heart's action. There were cardiac sounds under the left clavicle, but that tallied with the consolidation of the lung caused by the pleuritic effusion. There was no superficial venous radiation over the chest. The patient went on in this way for some time, neither better nor worse; but in the evening of the 16th he gulped up a small quantity of blood, turned in bed, and died.

On *post mortem* examination the right lung was found to be permeable to air, the left lung was consolidated and covered with a thick pleuritic capsule. So far the diagnosis was right. It was somewhat smaller than the other lung, which would explain the falling in of that side. But how explain the sudden death? When the lung was cut into, they found a kind of chronic pneumonia, although there had been no special evidence of chronic pneumonia. This, however, would not explain the spitting up of blood and sudden death; but on further examination they came upon the secret of the whole matter. There was an aneurism of the descending portion of the thoracic aorta. The aneurism pressed on the left bronchus; it corresponded to the third and fourth dorsal vertebræ; it was out of the way of nervous and sympathetic pressure generally, and therefore they had not these additional adjuncts to guide them in their diagnosis. There was also much atheromatous disease of the artery. Aneurism of the aorta was not diagnosed. It might be said they should have suspected it from the difference in the respiration of lungs. This would be natural if they had had dysphagia or any other link in the chain; but where the pulmonary changes could be explained by pleuritic effusion, and when the history of the case tallied so remarkably with the accession of acute pulmonary disease, the most rational and explicable interpretation of the case was adopted. The cause of death was not the quantity of blood that he spat out. He believed that the recurrent pneumonia might have been the cause of death; whether the healthy blood came from the aneurism or from the healthy lung he could not undertake to say.—*Medical Press and Circular.*

Carbolic Acid in Scarlatina.—By A. M. CARPENTER, M. D.,
Keokuk, Iowa.

I WISH to add the weight of my testimony to the beneficial influences arising from the local use of the acid in the Anginose variety of scarlet fever. Not only does it materially lessen the inflammatory process within the fauces, and conduce to the comfort of the little patient, but it prevents in some way, through its action upon the parts, septic poisoning, heals the ulcerated spots readily, and most effectually prevents the viscid faucial secretions from accumulating to an extent sufficient to embarrass efforts at respiration. The tonsils, I have observed, resume their normal tint much sooner after its use than from any other local agent. Besides, the liability to consecutive abscess and otorrhœa has been diminished in a very marked degree. So, too, does the tendency to serous transudation seem to be obviated, due precaution being exercised against a change of temperature for three weeks succeeding the desquamative stage, at which time the liability to renal congestion is greatest. Within the past five weeks I have treated nineteen cases between the ages of one and ten years without a single fatal result. In eleven, the febrile movement reached its maximum intensity. Delirium and great restlessness, with stupor, obtained in all these cases—the range of the pulse 140 to 155 to the minute. The heat of the skin was lessened by constant sponging with cool or tepid water and vinegar, iced lemonade *ad libitum*, to allay thirst and soften the parched and swollen tongue, with occasional laxatives, and a solution of chlorate potassa, two drachms to the pint, as a drink, together with the following topical solution to the tonsils twice daily (R. Acid Carbol. f. 3ss, glycerine, Aq. distil. aa. 3iss, misce) constituted the treatment.

To combat renal congestion spt. nit. dulc. in ten drop doses was relied on. Milk punch and animal essences were freely used when the heat of skin subsided. The acid assuredly supplies a void long felt by the profession; but let us hope that its value will neither be over estimated, nor the remedy discarded, until well tested.—*Physician and Pharmacist.—Detroit Review of Medicine and Pharmacy.*

Hæmatemesis.

DR. WALTER D. JONES reports a fatal case in which autopsy revealed cirrhosis of the liver, and so great a dilatation of the blood vessels of the stomach that many of them admitted the point of the little finger. The coats of the stomach showed no other signs of disease; the organ contained 45 oz. of coagulated blood.
—*Lancet.*

Parasites in Vaccine Lymph.

IN the fluid of true vaccine lymph, Dr. Haller, of Jena, found large quantities of red or reddish-brown micrococcus and mycothrix chains. The particles of the former are so small that even with a magnifying power of 1000 linear they still appear as mere points. When cultivated on the various soils a variety of fungiform growth appear, which, however, all belonged to one species, and formed the following series:—1. Acros pores, corresponding to the *Aspergillus glaucus* of Link. 2. Thecas pores—the *Mucor mucedo* of Fresenius. 3. Anaërophytic spores—that is, the *Ustilago carbo* of Tulasne. 4. Fructification, which is the *Eurotium herbariorum* of Corda. 5. Pycnides, with the subordinate forms, *Torula rufescens*, *Botrytis Jonesii*, and *Cladosporium*.

The micrococcus appears to proceed from the *Torula rufescens* or *Oidium lactis*. This torula and its highest state of development, the botrytis, prefer dark places. The eurotium also thrives best in darkness, which is interesting in connection with observations made to the effect that variola heals up without a cicatrix in the dark, and with the observation of Herr v. Bülmerincq, that direct sunlight soon renders vaccine lymph inoperative.—*Medical Record.*

Sulphate of Nickel in Neuralgia.

PALMER, in *The Med. Record*, No. 56, vol. 3, 1868, reports a cure with this remedy. The disease had resisted treatment for three years, and during the last two months had become very severe. Half grain doses were given thrice daily, and in eight days the paroxysms were reduced to one in twenty-four hours. With this amelioration of the disease, the pulse diminished in frequency, and sound sleep was procured. The medicine was then continued until a perfect cure was effected.—*Medical and Surgical Reporter.*

QUARTERLY RECORD OF OBSTETRICAL SCIENCE.

COLLATED BY JOSEPH HOLT, M. D.

Ovariotomy.

Dr. L. A. NEUGEBAUER performed successfully the operation of ovariotomy at the Heilige-Gist Hospital in Warschau after the method of Prof. Koeberle, the renowned ovariotomist, of Strassburg. The patient, a peasant girl, aged twenty-five years, of healthy parents, was perfectly well during her childhood and be-

gan to menstruate in her eighteenth year. Late in the fall of 1865 she was suddenly attacked with violent and deep-seated pains, originating in the left inguinal region and extending thence to the left thigh. These pains continued for some time, with occasional intermissions, till the spring of 1866. Soon after, a hard tumor of the size of a man's fist could be felt in the left inguinal region, which increased steadily. Her general health also becoming poor, the patient sought medical advice, and was admitted to the Heilige-Geist Hospital, on the 1st of August, 1867, where the disease was recognized as a cystoid degeneration of the left ovary. The tumor was eleven and a half inches long and nine inches broad ; it extended from the pelvis to the diaphragm, and consisted of three round portions, one larger and two smaller ones. The larger portion occupied the middle and lower part of the abdominal cavity ; one of the two smaller portions was above and the other to the right of the larger portion. All three portions of the tumor gave a dull sound on percussion and showed plain fluctuation. The largest portion adhered to a small part of the abdominal wall ; the smaller portions could be easily moved. The diagnosis was multilocular cystoma of the left ovary. The right ovary was unaffected, as the patient still menstruated. Slight ascites also existed in consequence of the veins being compressed by the tumor.

The operation was performed on the 27th of November, in the following manner :—The patient was placed on her back with her head and chest slightly raised, lying on a bed furnished with two mattresses ; her legs were put in a pair of wide and well-lined pantaloons ; stone jars filled with warm water and covered with linen were put to her feet and to the outer side of her legs and trunk ; a woollen blanket was also thrown over her while chloroform was administered. Dr. Neugebauer then made an incision of seven inches in the median line, which afterwards was extended one inch higher. About two pounds of free serum escaped from the abdominal cavity. As the tumor was found to be too large to be drawn through the opening, a trochar was put successfully into each cyst and 130 ounces of liquid withdrawn. Adhesions were found to exist between a small portion of the abdominal wall, the larger omentum, the left border of the uterus, posterior wall of the bladder, and the right broad ligament. In separating these adhesions, portions of the omentum were ligated and removed. The right ovary was found perfectly healthy. Dr. Neugebauer then, after having placed a ligature around the pedicle, removed the entire tumor by cutting through the pedicle near its attachment to the tumor. After sponging the abdominal cavity with warm water and fixing the stump in the lower part of the opening, the wound was closed by a deep and a superficial suture; for the former the quill, and for the latter the twisted suture was employed. After closing the wound it was covered with lint and linen compressed, and a broad bandage passed over the

whole abdomen. The whole operation lasted for one and a quarter hour. The Tumor weighed after removal 87 ounces, which with the 130 ounces of liquid previously withdrawn, gave to the tumor a total weight of 217 ounces. The tumor was found to contain numerous cysts, varying in size from that of a millet seed to that of a child's head.

The sutures were gradually removed during the next fourteen days. The patient slowly recovered, and was declared well on the 18th of January, 1868.—*American Journal of Obstetrics.*

Labor Complicated by Thrombus of Vagina and Perinæum.

DR. GEO. T. ELLIOT reports the following case in a paper published in the *American Journal of Obstetrics*:—On the 12th of July, 1868, I was summoned by Dr. Lewis A. Sayre to a lady in labor with her first child, with the following history: The labor was progressing naturally, though slowly, and as some time must of necessity elapse before the child could be born, Dr. S. left and went to his own house, in the immediate neighborhood. From thence he was summoned by the nurse, who sent word that all would soon be over. Dr. S. went immediately, and supposed at first, from the character of the pains, that such was the fact; but on vaginal examination he discovered that the head had not advanced, but that the vaginal walls and perinæum were as enormously distended by a rapidly increasing thrombus as they could be by the head. When I reached the house I found this state of things, and while we procured instruments and the persulphate of iron, the tumor continued rapidly to increase. The patient was under chloroform moderately, and did not seem as yet greatly exhausted. We gave her a large dose of brandy, melted Borden's extract of beef, provided ammonia and salts, and decided to attempt delivery by forceps, and to incise when necessary. Dr. Sayre introduced my forceps, and had to carry the transverse bars within the vulva to seize the head, which had completed the movement of descent. He rapidly locked the blades and drew, when the right labium cracked through the mucous surface, and a large clot of blood flopped out with such violence that a portion struck the top of my head, a distance estimated by measurement at three feet. I was seated on Dr. Sayre's right, holding, and outside of, the patient's left leg. She was on her back. A bistoury had previously been placed ready for use, and now Dr. Sayre freely incised the left labium and delivered a living child and the placenta with great rapidity. He then rapidly removed with his fingers broken-down cellular tissue from the gaping wound on the right side, and stuffed the open places on the right and left (which extended in an irregular and jagged

way across the perinæum) with lint steeped in Squibb's liquid persulphate of iron. He then gave ergot, and bandaged the woman with compresses and a T-bandage below. No more blood was lost at any future time. The patient was thoroughly fed and stimulated, and treated for the depressing influences of the loss of blood. The vagina was injected on the third day with a solution of weak carbolic acid, and gradually repair was effected, and the patient's health restored.

I am conscious that my description gives but a faint idea of the severity, extent, and startling suddenness with which the thrombus advanced, or of the activity and thoroughness of the treatment.—*Boston Medical and Surgical Journal.*

Myoma of the Uterus.

DR. NOEGGERATH (*Am. Journal of Obstetrics*) recently presented a specimen of myoma of the uterus, with the manner of removal, before the N. Y. Obstetrical Society.

He was called to see a woman forty-seven years of age, whom he found prostrated from loss of blood. She had always been healthy; was twice married, and had two children by her first husband. Between the death of her first husband and her second marriage, she worked extremely hard, and attributed her ill health to the hardships she endured at that time. She was married the second time seventeen years since, and had not been pregnant within that period. About seven or eight years ago she began to suffer from her present ailment, and her family physician thought he discovered a small fibroid. Dr. N. found the os-uteri quite patulous, so that he could easily reach the point of attachment of a tumor occupying the cavity of the womb.

On the following Sunday the patient was placed under the influence of ether, and he commenced to remove the growth. The os was contracted to half its previous size, and a great many adhesions were discovered between the tumor and the walls of the uterus. Some of these were removed by the scissors, but the écraseur could not be used for the want of space. On removing the lower segment of the mass, and the tumor being held by a hook, a pair of embryotomy scissors were introduced with the blades closed, and the attachment was gently broken up by expanding the blades. The remaining adhesions were cut with a knife. The tumor was removed with great difficulty through the os, after it had been freed from its attachments.

The patient made a good recovery.—*Medical Record.*

Examples of Cyst Formation in the Neighborhood of the Female Urethra.—By WILLIAM O. PRIESTLEY, M. D., Professor of Obstetric Medicine in King's College, London.

CASE 1.—In September 1867, I was consulted by a young married lady who had given birth to her first child six months before. She informed me that, when eight months advanced in pregnancy, a swelling appeared at the orifice of the vagina, which was not sensitive to touch, but was attended by forcing pain, and a sense of something about to protrude. When labor came on, a soft tumor, like a small egg, was found attached to the neck of the bladder, and projected into the vagina. Although all possible care was exercised in supporting it during the passage of the foetal head, the pressure to which it was subjected had the effect of bursting it, and a quantity of thick fluid was discharged by the urethra. No further discomfort arose from it at that time, beyond some slight irritation of the bladder; but when she began to go about again, the swelling reappeared as before, and from time to time discharged a quantity of semi-puriform matter.

When I saw the patient, she was suffering much inconvenience from bearing down, with irritation of the bladder, and the urine was frequently mixed with purulent matter. She was conscious of some swelling at the vulva, but it was not very sensitive, and occasionally almost entirely disappeared. She had been wearing a round inflated India-rubber pessary, but found that it did not support or prevent the formation of the tumour. On examination, I found an elastic swelling, of the size of half a hen's egg, lying in the vaginal orifice. It was not unlike a cystocele, but was rounder in form, with a narrower base, and it was attached not to the bladder, but to the posterior part of the urethra. As I squeezed it, a mixture of urine and pus flowed from the orifice of the uretra to the extent of half an ounce, and the swelling collapsed. On passing a probe along the urethra, it passed at first into the bladder, but by a little manipulation it entered a small orifice leading to the cyst, and the point was felt in the cavity of the cyst through the anterior vaginal wall. The tumor did not form again until the next time for emptying the bladder, when a portion of urine always passed into the cavity, which seemed like a diverticulum in the course of the urethra. The cavity of the cyst was evidently kept more or less constantly distended by the flow of urine into it; and it was habitually secreting pus, as proved by its admixture with the contents whenever squeezed out. I recommended that the patient should wear day and night one of Dr. Barne's fiddle-shaped dilators—one-half being in the vagina, and the other half out—pressure in this way being exercised along the whole course of the urethra. This, I found, entirely prevented the filling of the pouch, and it greatly lessened the discomforts of the patient. So long as she wears it, she has no irritation of the bladder or bearing down; but if its use be discontinued, the swelling reappears. I saw the patient a few

days ago, and then learned that the cavity had ceased to secrete pus, and appeared to be lined by an adventitious mucous membrane, for when the swelling is allowed to form, and its contents are pressed out, unmixed urine flows from the urethra. The patient, being in comparative comfort with her pessary, is indisposed at present to submit to any surgical treatment; but it seems obvious, after such a length of time has elapsed without closure of the cyst-cavity, that some operation will be required for its obliteration. I have suggested that, when any interference is permitted, two or three sutures should be passed through both sides of the cyst, and so tightened as to bring about adhesion of its walls.

CASE 2.—In February 1868, I was asked to see a patient near the climacteric period of life, who was suffering from great pain and tenderness in the genital passages, with difficult and painful micturition. She was the mother of two children, both grown up, and had generally enjoyed comparatively good health, but had from time to time been under medical care; and there was some obscure history of kidney-disease, from which she was said to have suffered in previous years. For some time before the present illness, she had begun to loose flesh, and have other indications of delicacy, but there was no general oedema. The development of the local symptoms mentioned had been recent and gradual. Before she began to suffer pain, she had observed that the urine was habitually cloudy and threw down a large quantity of opaque deposit immediately after it was passed. Then she had noticed a certain amount of obstruction to the flow of urine, with occasional pain of a spasmodic character about the neck of the bladder. These symptoms gradually increased, until eventually her condition became very distressing. At the time when I saw her, she was flushed and feverish from suffering and want of sleep. The tenderness about the vulva was such that she could only walk with difficulty, and she could not sit without a great increase of pain. She was disturbed day and night by a frequent desire to empty the bladder, but micturition was performed with much difficulty and straining, and a very imperfect sense of relief followed. I was shown two or three recent specimens of urine, which were very turbid, and alkaline in reaction. Almost a third part was formed of an opaque sediment, which proved to be mucous, with a large admixture of pus and a little blood. The clearer part was highly albuminous. On making an examination, the vagina was found to be very hot and tender, and a swelling, half the size of a hen's egg, obstructed its orifice. This tumor was attached by a broad base to the posterior half of the urethra, and was covered by the mucous membrane forming the anterior wall of the vagina. It was semi-fluctuating, but at the same time very tense and smooth, and any amount of pressure which the patient could bear did not lessen its bulk. A sound passed along the urethra encountered obstruction opposite to the swelling, and produced much pain there, but the instru-

ment passed eventually into the bladder. Warm fomentations with sedatives, and the maintenance of the recumbent posture, relieved the more immediate suffering; but no substantial improvement occurred until two or three days later, when I was informed that sudden remission of the pain had followed the passing of some fatty matter in the urine, which on cooling had become solidified. On examining this, I found that it very closely resembled buttons of yellow beeswax floating on the urine, and the quantity collected was nearly a tablespoonful. It consisted of molecular fatty particles mixed with epithelial débris, such as is commonly found in sebaceous cysts, but closer and harder than I have seen this material elsewhere in the body. Vaginal exploration proved that the swelling had diminished to less than half its original size; and, instead of being tense as before, it was now flaccid, and the vaginal rugæ were apparent on its surface. The sebaceous matter continued to pass in less abundant quantity for two or three days, and subsequently the patient suffered much less, and the febrile condition entirely disappeared. In the course of ten days she was able to take a carriage drive, but did not perfectly recover, some local tenderness always remaining.

From time to time the cyst again filled, and its contents were discharged by the urethra. The irritation of the bladder, notwithstanding treatment, still continued, but in a less degree, and the urine habitually contained pus and triple phosphates. Whenever the cyst was most distended there was much increase of suffering, but after its discharge comparative ease followed. Attempts were made on several occasions to introduce a probe through the urethra into the aperture of the cyst, but they failed, and eventually I was led to believe that the aperture was valvular in form and opened backwards towards the bladder. My reason for this supposition was, that I could sometimes almost empty the cyst by pressure, and yet the contents did not immediately escape by the urethra, but evidently passed into the bladder—sebaceous matter appearing with the next flow of urine. The collection found on vaginal examination was very variable. At one time, more than a month after the first discharge of contents, Mr. Paget was consulted as to the propriety of some surgical treatment for its permanent cure, but it was then scarcely noticeable, and it was deemed best not to interfere until it should again become prominent. A week or two later, when it became again distended, she desired another surgical opinion, and she saw Mr. Spencer Wells. It was then proposed that some threads or a seton should be passed through the cyst for its obliteration, or, if this prove ineffectual that it should be laid open by the vagina. The patient, however, shrank from any form of surgical interference, and eventually left town without any operation being performed. The early history of this case was obscure; but my impression is that the patient had suffered primarily from chronic inflammation of the bladder, and that the formation of the sebaceous cyst of the urethra, with all its attendant discom-

forts, had been superadded to this—perhaps, indeed, had been provoked by it.

CASE 3. I saw some years ago, in the maternity department of the Middlesex Hospital. The woman, expecting her confinement, sought advice about a swelling on the neck of the bladder. It was not bigger than a large marble; attached to the posterior third of the urethra; and evidently contained fluid, but was not painful to touch. The patient had borne children before, and there was much relaxation of the pelvic tissues. When labor came on it was rapid in its progress, and the cyst entirely escaped injury. When puerperal convalescence was completed, it seemed somewhat smaller than when first examined, but was still tense and hard. The patient eventually removed from the locality and was lost sight of.

Cysts of the female urethra are probably not common, for few cases are recorded. Two cases of cyst of the anterior wall of the vagina are mentioned by Dr. West in his *Lectures on the Diseases of Women*, as having been observed in his own practice. Another is to be found described in Scanzoni's *Beitrage*, etc. These are probably, examples of the same pathological condition, but in none were the contents of the cysts sebaceous as in Case 2. I infer that my own cases were cysts, taking their origin in the structures of the urethra rather than of the vagina; because, in the first place, two of them discharged their contents into the urethra, *not* into the vagina; and, in the second place, in all the three cases the cysts were developed towards the posterior part of the urethra, the mucous membrane of which is largely supplied with glandular structures. As pointed out in Sir James Simpson's article, "Hermaphroditism," the follicular glands and structures exists abundantly in the course of the female urethra; and the canal, throughout its length, is truly a morphological analogue of prostatic and membranous portions of the male urethra. It may, therefore, reasonably be assumed that cysts, above described, take their origin in the follicular structures of the urethra, just as cysts of the labia are formed by obliteration of the duct of the glands of Bartholin, and accumulation of the secretion in the gland structure.—*British Medical Journal*.

Pain in the Uterine Flexion.

DR. MEDOWS began by asking whether the congestion and inflammation, with the attendant pain and local distress, which are so frequently present in uterine flexions, are the cause or the consequence of such flexion. He pointed out the practical bearing of the question in its relation to therapeutics, showing that if they were the cause of the flexion, treatment should be mainly directed to them, but if the consequence, then the mechanical reposition of the uterus claims first attention. Allusion was made

to the recent advocacy of the latter view by Drs. Graily Hewitt H. G. Wright, and others, from which the author expressed his entire dissent, maintaining that the former was entirely reconcilable with the clinical history of these displacements, and contending that the explanations offered by the advocates of the latter view were not borne out by facts.

The author showed that in the great majority, if not all, the cases of uterine flexion which apply for treatment, congestion, and inflammation of the uterus exist; and he adduced the following reasons for believing that this inflammation almost invariably precedes, and is the principal, if not the sole cause of the displacement: 1. That very commonly there is an antecedent history of uterine disorder. 2. That cases are often met with presenting very much the same general symptoms as those met with in uterine flexions, but where, on examination, inflammation without any flexion whatever is discovered. 3. When in such cases flexion takes place, the additional symptoms are due merely to the mechanical effects upon the surrounding parts, and are clinically separable from the preceding symptoms. 4. Cases of acute flexion are sometimes met with where no uterine symptoms exist, and in such cases there is a complete absence of all inflammation. Various statistics were brought forward to prove that enlargement of the uterus from frequent gestation strongly predisposes to uterine flexion. Lastly, the author remarked, that, for the foregoing reasons, our first care in the treatment of those cases ought to be to remedy that which is not only the cause of flexion, but is at the same time responsible for by far the greater part of the patient's sufferings. When this is accomplished, but not before, we may resort to mechanical or other treatment for the reposition of the organ. The author believed that great evils would be likely to ensue if this plan of treatment were reversed.—*American Journal of Obstetrics.*

Case of Post-Partum Hæmorrhage. By F. E. WILKINSON, M. D.

THE following case may be of some interest as introducing a new mode of arresting uterine hæmorrhage. In the year 1860, I was called upon to attend Mrs. G—, an hæmorrhage patient (a lady of the middle class), in her first confinement. Parturition was tedious, both from the length of time occupied, in consequence of the insufficiency of the uterine action, and from the occurrence of persistent vomiting; and delivery was performed with the aid of the forceps. The placenta was expelled by the natural efforts some twenty minutes after, but the uterus contracted feebly, and shortly afterwards severe hæmorrhage took place. I was here ably assisted by my son, Dr. G. F. E. Wilkinson, then a student of medicine, and with his aid, ergot and food and stimulants were administered, and cold injections thrown up, but with

no success ; slight contraction taking place, but the uterus then becoming perfectly flaccid. Haemorrhage continued, and the patient became rapidly depressed. The pulse at the wrist was almost imperceptible, and there seemed every reason to apprehend immediate dissolution. At this trying juncture I observed a large sponge lying in the room, and as both my hands were engaged in endeavoring to control the fearful haemorrhage, I directed that the sponge should be threaded with some strong string, and washed in cold water, when I squeezed it into as small a compass as possible, and introduced it into the uterus. Immediately contraction took place round the sponge, and after gently applying a bandage over the abdomen, and persisting in feeding for some hours with liquid food at frequent intervals, the pulse became gradually more perceptible, and the patient was rescued from imminent danger. The sponge was expelled into the vagina upon the third day, and was removed by the attached string without difficulty, and the patient recovered more rapidly than could have been expected after such a loss of blood.

I have since used the same plan in several cases of uterine haemorrhage in my own practice, and when I have been called in to assist other practitioners, and it has been attended with unvarying success. I believe the plan to be valuable (as in the case I have recorded) in some apparently hopeless cases.

No doubt the elasticity of the sponge keeps up a constant regular pressure upon the whole of the internal superficies of the uterus, whilst its spiculae also stimulate the uterus to contract.

I have been in the habit of injecting a weak solution of carbolic acid to arrest fetor, both before and after the sponge was removed, but if it were desired to apply any other remedy, such as the solution of the perchloride of iron, etc., it could not be applied better than by injecting it into the sponge. But one great advantage of this plan of treatment is, that it can do no harm—*The Lancet.*

Case of Double Collection of Waters. By J. P. CHESNEY, M. D.,
New Market, Missouri.

JUNE 3d, 1868. I was requested to attend Mrs. L., in confinement with her eighth or ninth pregnancy. On the first examination, found the os uteri almost fully dilated, the "bag of waters" full, and tense with each pain, and so far protruding that I immediately determined on rupturing it, and thus hasten delivery. I perforated the membrane with a pin, and there immediately followed the usual quantity of amniotic fluid, but the foetal head did not descend as is often the case in these lax-fibred women. I felt the head, but instead of the hairy scalp occupying the usual situation, I found another "bag of waters," well filled, tense, and protuberant, not in any respect differing from the first, so far as I could judge from the touch. I ruptured this "bag" also, which

was followed by a very plentiful discharge of "liquor," and the labor was soon completed by the birth of a fine, healthy child.

I was somewhat puzzled by this abnormal condition of the fetal membranes, as I had not seen a word said in regard to it by the books, and had never met with such a case in a practice extending through several years, and involving the attendance of some hundreds of obstetric cases.

I had almost forgotten the matter until it was again brought to my mind by the notes of the two cases reported by Dr C. A. Logan, in his article on "Certain Constitutional Causes of Abortion," in the *Herald* for December 1868.—*Leavenworth Medical Herald.*

The Sutures for Vesico vaginal Fistula Inserted by means of Canula-needle, with Report of a Case. By Prof. PAUL F. EVE, of Nashville.

In 1860, I utterly failed to benefit a patient laboring under the most distressing affection in the female, *vesico-vaginal fistula*, in which a clamp suture was tested. There is little doubt now but that this case could have been relieved by the recent improvements in gynecology. Still I have never been satisfied with the practice pursued in introducing the sutures for closing the fistulous opening, after its edges are prepared for reunion. The short, curved needle, insecurely held and imperfectly directed by long forceps, armed with a long, double silk thread, having attached to it a long silver wire, also doubled, the whole of which is dragged through the entire tract made in the soft parts, with the traction on the cord at right angle to its proper course, is surely difficult, cumbrous, painful, tedious, unscientific, and now unnecessary. Frequently half an hour is consumed in this part of the operation, while the patient is in a constrained and exceedingly unpleasant position. By the canula needle the ligatures may be applied at any desired point in a few minutes. In witnessing an operation for this sloughing of the vesico-vaginal septum, to which I was kindly invited in the Sister's Hospital in St. Louis last fall, and impressed with the difficulty and delay in applying the sutures, the hollow needle was proposed, and fortunately an opportunity soon occurred for proving it.

On the 15th of November last, I was called to a case of vesico-vaginal fistula in a young lady, who, during her first delivery, a week or two previously, had had the bladder neglected for many hours, which resulted in a transverse fissure of about a half inch and a half by three-quarters of an inch, and situated about an inch and a half from the orifice of the urethra. The 16th of January, 1869, assisted by Dr. Shumard, Professor of Obstetrics, etc., in the Missouri Medical College, and Drs. Poindexter, Prewitt, Moore and Maughs, the patient was placed in the position now recom-

mended by Dr. Sims, and accepted by the profession; the anterior lip of the fistula was freely excised by an knife and the posterior one with scissors, then with the canula-needle, such as I have been using for years, carrying a very fine silver wire, about nine sutures were introduced in some ten minutes. Tieman's improvement, as well as Dr. Briant's, formerly of St. Louis, now of Lexington, Ky., each consisting of a longer canula, with forceps to hold and assist in pushing forward the wire, were both tried, but found to bend in thrusting it through the parts, and moreover, permitted the metallic ligature to kink. The simple canula was admitted by all present to be the best instrument, and gave entire satisfaction in planting the ligatures. I prefer, too, the ordinary knot, for one can see the line of union and regulate the pressure in tightening the stitch. The suture-adjuster obscures this, nor can we tell how many turns to give the forceps in twisting the wire. After one knot, the adjuster may be used.

On the tenth day, after the usual treatment of such cases, which in this instance, was carried out faithfully, the sutures were all removed, except two, and these on the twelfth, when union of the most satisfactory character was found existing.—*Richmond and Louisville Medical Journal.*

Rupture of the Female Bladder—Death. (Under the care of Mr. COLLINS,) Meath Hospital.

JULIA G., æt. twenty-six years, a married woman, and the mother of six children, was admitted into the Meath Hospital, December 10th, at twelve noon. She was a woman of intemperate habits; and on the night of December 7th had retired to bed under the influence of drink. She got up to pass water, but failed to do so, and in endeavoring to return to her bed she fell over the wooden foot-board and fainted; she was then lifted into bed, where she remained until morning, when she complained of pain in the hypogastric region, and inability to pass urine. She said that she felt as if "something had given way inside her;" and upon a renewed effort she passed a small quantity of water mixed with blood.

On admission to hospital, on the third day after the accident, she complained of pain and tenderness on pressure in the right side of the hypogastric region; her abdomen was much distended and tympanitic; and on introducing a large male gum elastic catheter, about a pint of urine mixed with blood and clots was drawn off, about the same quantity trickling away afterwards.

A warm poultice was applied to her abdomen, and an enema containing castor-oil and tincture of opium was administered, as her bowels had not been moved for several days.

She then expressed herself much relieved, as the enema

operated well, and removed a quantity of flatus; and about two hours afterwards she voluntarily passed several ounces of urine mixed with blood. She remained much in the same condition until five o'clock A. M., December 11th, when she commenced to vomit considerable quantities of dark-colored fluid, and complained of great pain in the hypogastric region. She again passed a few ounces of urine.

The following mixture was ordered :—

R Acidi hydrocyanici dil. $\frac{3}{4}$ ij,
 Liquoris bismuthi, fl. drs. ij.
 Spiritus chloroform, fl. drs. jss.
 Aquæ ad., fl. oz. vij.

Two tablespoonfuls every second hour.

Six leeches were applied over the hypogastric region, and a large warm poultice was afterwards placed in the same situation, and she was administered two grains of powdered opium.

Dec. 11th, 9 A. M.—Patient stated that she was much relieved, but lay in the attitude of peritonitis; the vomiting had nearly ceased, and the pain was diminishing. She was ordered a suppository, containing half a grain of morphia, every fourth, and a tablespoonful of brandy in a cup of milk, every second hour. At three o'clock P. M., however, she suddenly began to sink, and at five P. M. she expired.

A *post-mortem* examination was made on the following day, when the pelvic portion of the peritoneum was found to be inflamed, and to contain about one quart of dark-colored serum, but was free from any appearance of plastic effusion. The peritoneum was not ruptured, but on passing the finger over the anterior surface of the bladder, a cavity was found containing fluid of a urinous color; and beneath this, where the viscous is uncovered by serous membrane, a large transverse rent was discovered. There was some effusion into the cellular tissue surrounding the bladder, but none into the labia. The coats of the bladder appeared to be quite healthy, but no attempt at reparative action had been set up.

The rarity of rupture of the bladder in the female renders this case of much interest; indeed, Mr. Collins believes it to be unique, the only accident at all resembling it which he is aware of, being one recorded by Professor R. W. Smith, the account of which may be found in the *Dublin Journal of Medical Science*, vol. xxv., page 176. The cases resemble each other, inasmuch as they were both caused by direct violence applied to the front of the abdomen, but differ in the situation of the rupture, in Prof. Smith's case the rent being in the posterior superior part of the bladder, while in Mr. Collins' it was situated anteriorly where the bladder is uncovered by peritoneum.—*Medical Press and Circular.*

A New Uterine Syringe.

DR. HERMAN BEILGE, of the Metropolitan Free Hospital, London, (*Berliner Klin Wockensch*, No. 25, 1868), has constructed an instrument which he claims is free from the objections urged against most other syringes.

He takes a glass jar, of from two to three quarts capacity. Its neck is provided with a metallic ring, into which a high brass stopper fits, and is tightened by a few screw threads. On one side the stopper receives a tube having near its distal end a hand-ball and an air-chamber, and at the other terminating in a small, plain opening on the under surface of the stopper. On the other side, the stopper is connected with a flexible tube, which can be cut off, by a stop-cock, from communicating with a tube leading to the bottom of the jar. The free end of the tube is of vulcanite, and so shaped as easily to receive various sized or shaped nozzles. Pressure on the distal ball forces the liquid through the nozzle, and the near ball, acting as an air-chamber, keeps up a continuous stream.

Before using, close the stop-cock, and press the distal ball a few times; on opening the stop cock, a stream commences to flow, and pressure is only required now and then, to keep it up.

The Doctor has used small instruments of like construction in making injections for microscopical purposes. He also uses the large syringes, with nozzles of various sizes and shapes, for the eye, nose, rectum, to cleanse wounds, and, indeed, wherever a good continuous stream is of advantage.—*Medical and Surgical Reporter.*

Operation for Procidentia Uteri: By ISAAC E. TAYLOR, M. D., Emeritus Professor of Obstetrics in Bellevue Hospital Medical College. Reported by J. B. COX, M. S.

THE patient was an inmate of Charity Hospital, on Blackwell's Island, aged about thirty-five years. Examination showed that she was in good health constitutionally, and had been for several years. She was a multipara, has had no obstruction of the menses until recently, but has suffered much inconvenience from prolapsus.

Having been placed under the influence of an anesthetic—ether, this being preferred to chloroform—further examination showed the *cervix uteri* protruding two inches externally to the *libia majora*, very much enlarged, and so elongated as to measure, with the uterus, from the *os* to the *fundus*, five and a half inches. The *cervix* was also reflexed on the perineum; while the body of the uterus was retroverted, as ascertained by means of a probe. It was also ascertained that the *cul de sac*, both anterior and posterior, extended so low down on the *cervix* that it was imprac-

ticable to remove by excision more than about half an inch of the *os*. This operation was immediately performed with scissors—there being but little haemorrhage, which was checked by per-sulphate of iron.

The patient was not seen again by the class until the thirteenth day after the operation. She was then examined and it was found that the uterus had resumed its normal position, with the exception that it was perhaps a little too low. The length from the *os* to the *fundus* was two and a half inches, thus presenting what might be termed an almost natural uterus.

Considering the condition of the uterus before the operation, which is undoubtedly a rare one, and the duration of the trouble, as well as the almost if not entirely radical cure which was effected, it is fair to infer that the operation is one which should be understood and practiced, when necessary to the relief of a patient.—*Pacific Medical and Surgical Journal*.

An Ovarial Cyst Containing Hair.

THE above was found by Dr. Paulicki, of Hamburg, (*Weiner Med. Presse*, No. 40, 1868,) in a woman of the town, aged twenty-three years. Her left ovary was found to be transformed into a number of cysts; one of which, on being opened, revealed a pale-yellow, fatty, glistening mass, of a pappy consistence, and a great number of brown hairs. The single hairs measured from two to five inches, and were somewhat thinner than the hair of the scalp. The cyst which contained these was of the size of a goose's egg. The left ovary had also numerous cysts; there were close adhesions between the uterus and rectum, and between the former and the ovaries and tubes. A radiating cicatrix was found in the vaginal portion of the uterus. Death had been caused by syphilitic erysipelas of the head.—*Medical and Surgical Reporter*.

A New Speculum.

DR. MEADOWS exhibited a new vaginal speculum. It resembles Cusco's in regard to the two blades, upper and lower, whose divergence is effected by a simple act of pressure, but to prevent the lateral folds of the vagina from falling down between the blades, and obstructing vision, Dr. Meadows has adapted another narrow blade to each side, making four blades in all. These latter, when the instrument is closed, fall within the two larger blades, and are so hidden as not to interfere with easy introduction.—*Medical Times and Gazette*.

MEDICAL CHEMISTRY, THERAPEUTICS AND MEDICAL JURISPRUDENCE.

COLLATED BY WM. HUTSON FORD, M. D., PROF. MEDICAL CHEMISTRY, ETC.,
NEW ORLEANS SCHOOL OF MEDICINE.

Sulphate of Nickel in Neuralgia: By J. DABNEY PALMER, M. D.,
Monticello, Fla.

THE interest of the following remarks does not lie in the employment of the sulphate of nickel in neuralgia, but in its therapeutic effects. We are told that it is a gentle tonic, acting like the preparations of iron and quinia. In this case, however, it seems to exercise a sedative influence, more closely resembling that of the bromide of potassium.

Mrs. B. has suffered with neuralgia more than three years. During the last two months the paroxysms have been very violent and frequent—occurring every few minutes. She has taken iron, quinine, arsenic, strychnine, colchicum, aconite, morphine, chloroform, valerian, zinc, mercury, electricity, and many other remedial agents, with only temporary relief. As professor Simpson had used the sulphate of nickel successfully in a case of severe and obstinate periodic headache, I concluded to try it, and began February 19th by giving her half-grain doses three times a day. In less than a week the paroxysms were reduced to only one within twenty-four hours; this came on at noon. On last Sunday [March 1st] it did not commence until about three p. m. I was present and gave one grain of the sulphate, notwithstanding she had taken her regular doses that day. Its sedative action was speedily manifested in reducing the pulse and producing sleep. All symptoms of the paroxysm disappeared, and Mrs. B. states that they did not return until seven o'clock. In this case the sulphate of nickel has given more permanent relief than any thing else; Mrs. B. tells me that it soothes her quicker than morphine, and is not followed by any unpleasant effects.—*Richmond Medical Journal*, April 18, 1868.—*California Medical Gazette*.

On the use of the Bromides in Cases of Lead or Mercurial Poisoning.

IT is well known that several years ago Natalis Guillot and Melsens recommended the iodide of potassium as the best agent for removing lead and mercury from the system. Dr. Raberteau, who has been performing some interesting experiments relative to the action of bromine and the bromides, has been led to substitute these latter for the iodides as eliminating agents of the metals in question. He was brought to the idea by observing that the bromides are very slowly removed from the system,

while the iodides pass out soon after administration. The former, therefore, are disposed to accumulate in the body, and hence have a greater opportunity of dissolving the lead or mercury which may be in the tissues. In illustration of this theory, M. Raberteau cites the following interesting experiment:

He gave a dog twenty centigrammes (about three grains) of the acetate of lead. Saturnine poisoning was produced, and continued till, at the end of several days, he administered ten grammes (one hundred and fifty grains) of the bromide of potassium in two doses. The effect was, that all the symptoms of lead-intoxication soon disappeared.

M. Raberteau also adduces the case of a patient, blind, as was believed, from the effects of lead, and whose condition was greatly improved by the bromide of sodium. He prefers this salt to the bromide of potassium, on the ground that it is harmless, while the latter is poisonous.

He then refers to the case previously published, in which a man, effected with mercurial trembling, headache, and obstinate insomnia, was cured by the use of the bromide of potassium, after the iodide had failed.—*Gazette Hebdomadaire*.—*Buffalo Medical and Surgical Journal*.

Deodorants.

FOR many purposes dry clay is not only the cheapest but the best deodorant. I tried nearly everything in a privy, and only succeeded by using occasionally small quantities of dry clay loam. I took equal quantities of old putrid urine, and mixed severally with clay, sulphate of lime, animal charcoal, and wood charcoal. After a few hours the clay mixture alone was devoid of odor. It *destroys* or *absorbs* the foul odors, instead of partially overcoming them by substituting chlorine or cold tar in their place.

The presence of clay has a great influence upon the health of communities. I have known many cases of typhoid fever and dysentery in this vicinity within a few years, nearly every one of which has been on a sandy or alluvial soil. Where the water used has filtered through a clay soil, there has hardly been a case of these diseases.

There is another advantage in the country in using clay for privies. The removal of the contents is no longer a disgusting operation, while the farmer or gardener has a valuable supply of fertilizing material for his grounds.

I believe that clay would be an excellent application to foul ulcers and other discharging sores.—*H. A. Sheldon, Middlebury, Vermont*.—*St. Louis Medical Reporter*.

A Simple Method of Protecting Water from the Action of Lead Pipe.

DINGLER'S *Polytechnisches Journal* publishes a simple method, brought forward by Dr. Schwarz, of Breslau, for preventing the poisonous influence of lead pipes on water, by forming on the inside surface of the pipes an insoluble sulphuret of lead, which has proved so effective that, after simple distillation, no trace of lead can be detected in water which has remained in the pipes for a long time. The operation, which is a very simple one, consists in filling the pipes with a warm and concentrated solution of sulphuret of potassium or sodium ; the solution is left in contact with the lead for about fifteen minutes. Commonly, a solution of sulphur in caustic soda will answer the purpose, and produce practically the same results. It is known that sulphuret of lead is the most insoluble of all compounds of lead, and nature itself presents an example which justifies the theory of Dr. Schwarz, since water extracted from the mine of Galena does not contain lead, a fact which has often occasioned surprise.—*St. Louis Medical Reporter.*

A Case of Poisoning by Stramonium, and Novel Way Resorted to to Produce Vomiting. By J. J. HILLIARY, Uxbridge, Licentiate Medical Board.

On the evening of the 20th September I was sent for, to see a man, J. P., aged 40, who the messenger stated had taken a tea-cupful of herb tea, made from an herb sent by a friend of his and recommended as a cure for asthma, to which he was subject. About five minutes after he had taken it, he became "wild and didn't know any one," when I got to the house (in about ten minutes) I found him seated in a chair, leaning forward on his knees, shivering, staring wildly, countenance bathed in perspiration, pupils largely dilated, talking vaguely, and perfectly unconscious of surrounding objects, pulse 90 and full, hands and arms convulsed, every few moments legs unable to support his body, and dragged after him when we tried to get him to walk.

On examination of the herbit proved to be *Datura Stramonium*. The first thing to be done was to give an emetic. Mixed half a drachm of sul. zinci in one ounce water, and tried to get him to swallow it, but he either could not or would not, although we held him and forced it into his mouth, holding his nose at the same time. There being no stomach pump to be got, I took a No. 12 gum elastic cathether, forced open his mouth, passed it down the oesophagus, and having ready a solutiou of sul. zinci, I took it into my mouth and squirted it through the cathether into the stomach. In about twenty minutes he vomited freely, throwing up a quantity of stuff smelling strongly of "the herb tea." He remained in a state of

stapor, with the convulsive movement of the arms, for about twelve hours, then fell asleep for six hours, and awoke sensible, but feeling "very queer," and complaining of his throat being sore and a difficulty in swallowing. His pupils continued dilated for several days, but when last I saw him he was quite recovered and very grateful.—*Dominion Medical Journal.*

Carbolic Acid; Its Doses and Medicinal Value. By HENRY WILLIAM FULLER, M. D., Cantab, Physician to St. George's Hospital.

Four years ago, being desirous of testing the value of carbolic acid as an internal remedy in the treatment of disease, I determined to administer it experimentally in various cases at St. George's Hospital. My first object was to obtain the maximum dose in which it could be taken without inconvenience, to note the symptoms, if any, produced by full doses, to determine its action on the pulse and the secretions, and to observe whether any evidence could be obtained of its cumulative action. Never having given it internally before, and never having heard of its having been administered in more than two minim doses, I began by the exhibition of two minimis dissolved in a drachm of glycerine and 11 drachms of water. This was given three and ultimately four times in the twenty-four hours. Finding that no appreciable effects resulted from that dose, I added one minim to each dose on alternate days, until the patients were unable to swallow a stronger dose or complained of unpleasant symptoms. Thus, as far as the mere dose was concerned, I found that some adults—especially men who had been spirit drinkers—could take ten or twelve minimis without inconvenience, and notwithstanding the occurrence of a certain degree of discomfort, could take doses of fifteen minimis three or four times a day for many days consecutively; but that most persons, especially, women, began to complain when the dose had been increased to eight or ten minimis, and found six or seven minimis a full dose.

The disagreeable symptoms produced by full or overfull doses were, firstly, a burning sensation in the throat on swallowing the draught; and secondly, a giddiness and fullness, or peculiar feeling in the head—a feeling which occurred in some within two minutes after taking the acid, and in others not until the expiration of six or eight minutes. In some persons this giddiness passed off in ten or fifteen minutes, and in others lasted nearly an hour. In no instance was there any distinct headache, or any interference with vision; but when the giddiness was severe, there were in some instances cold clammy perspiration and feeble pulse.

The physiological action of the acid in various doses was noted in health and in different morbid conditions. In health, the only effect which was observed to follow moderate doses—four to six

minims,—was the production of a peculiar greenish tint in the urine, and the disappearance of all deposites of lithates. Both these phenomena were most marked when full doses—eight or ten minimis—were given, and in themselves were very remarkable. The intensity of the greenish tint varied considerably. Apparently it was more influenced by the state of the urine than by the mere dose of the acid; but the disappearance of the lithates from the urine bore a tolerably constant ratio to the dose of the acid, so that, if the administration of four or five minimis failed to produce the desired effect, the addition of three or four minimis to each dose would in most cases accomplish it within three or four hours. Indeed carbolic acid proves so powerful an agent in clearing the urine of lithates, that it will operate with tolerable certainty in cases in which moderate doses of alkalies fail altogether in checking the deposit. It does not increase or diminish the secretion of urine, nor does it appear to exercise any influence on its specific gravity; it does not effect the action of the bowels though it diminishes the offensive odor of the motions; it has no effect on the temperature of the body, nor does it influence the pulse, except when it is given in excessive doses, and excites giddiness and cold perspiration, and then the pulse is accelerated.

Having remarked the uniformity of the action of the acid in checking the deposit of lithates, and thinking possibly it might control the formation of lithic acid, I administered it in full doses in several cases of gout. It certainly rendered the urine clear, but it did not appear to modify the gouty action or check its continuance. The same may be said of its action on rheumatism.

In dyspeptic cases—of the fermentative class—accompanied by the copious evolution of gas from the stomach, and the discharge of fetid evacuations from the bowels, its effects are often most satisfactory. Administered in six or eight minim-doses it stimulates and is extremely grateful to the stomach; it causes an immediate evacuation of flatus, and, by checking fermentation, it puts an end to the evolution of gas which forms the most distressing feature of many varieties of dyspepsia. With the exception of charcoal, I know of no remedy so useful in these cases, and it not unfrequently operates beneficially even when charcoal fails to relieve.

In typhoid or gastric fever, in which, *à priori*, beneficial results might have been expected from its employment, I have been unable to observe any controlling influence. The temperature keeps up, and the disease runs its course utterly unchecked by even full and repeated doses. In a case, James J. now under my care at St. George's Hospital, ten minimis were taken every three hours for eighteen days, and throughout that time—from the sixth to the twenty-fourth day of the attack—the temperature ranged from 99 to 104—being 102 at the beginning and fully 102 at the end of the time. In several other cases of typhoid fever, and also in cases of typhus, I have noticed the same absence of controlling power.

In scarlatina, accompanied by sloughing throat, I have employed it on one occasion, and fancied that it proved beneficial. Having regard to the action of the scarlatina poison on the mucous membrane of the stomach, it is not unlikely to prove active for good, and certainly deserves a trial.

In the form of spray, I have used a solution varying in different cases from five to ten minims of the acid to an ounce of water for the purpose of inhalation. It has been employed in the early and advanced stage of phthisis—in so-called laryngeal phthisis, in chronic bronchitis, in gangrene of the lung, and in various affections of the throat, including diphtheria. In the last named, it does not prove so useful as the pure solution of permanganate of potash administered in the same way, which sometimes appears to exercise a magical effect in clearing the throat of the membrane, but in all the other forms of complaint it exercises in many instances a decidedly beneficial influence. It lessens the irritability of the mucous surface and facilitates expectoration, and the patients aver that it affords relief. In gangrene of the lung, it removes the fetid odor, and otherwise appears to be productive of good.

The only disagreeable symptom which I have observed to follow its employment in the form of spray, has been occasional faintness when the inhalation has been continued too long. The time at which this faintness occurs varies greatly in different cases, I therefore instruct the patient to desist inhaling as soon as the slightest discomfort arises. My impression, however, is, that this faintness is not induced by the action of the acid, but rather by the abnegation of atmospheric air which attends inhalation with Siegle's apparatus; for, in every instance except one in which I have observed it, Siegle's steam apparatus was being employed. I therefore prefer using the common hand-bellows, previously heating the solution of acid if the inhalation of cold spray seems likely to be prejudicial.—*British Medical Journal.*

Phenic Acid as a Febrifuge.

At a meeting of the Academy of Science of Paris, M. Clerseul communicated on the part of M. Calvert, a note on the employment of phenic acid as a febrifuge superior to quinine. In the little town of the Island of Maurice, during the months of December, 1867, and January, 1868, in a population of 900 inhabitants 300 suffered from typhoid fever, and 41 died. Phenic acid was employed to disinfect the sewers and cesspools in the town, and for sprinkling with a weak solution the alleys and passages. The fever disappeared rapidly, and three months afterwards, in the report of Dr. Gower, it was established that from the 17th of February, when the use of the phenic acid was established, to the 1st

of April, only two deaths took place, both of them in the first fortnight.

Dr. Tessier universally treats his cases in the island by the same means, and with wonderful success. For example:—

"After the administration, from June 7th, to a Creole attacked with intermittent fever, for seven days, of doses of quinine, the fever was arrested, but reappeared on July 1st, and, despite the repetition of the treatment, with the addition of salts of iron and extract of cassia, no good result was obtained.

"Dr. Tessier then injected under the skin three quarters of a grain of pure acid, dissolved in twenty drops of water, and the fever disappeared. A second injection was, as a precaution, made on the 12th, and the fever never returned. Twenty-seven patients submitted to the same treatment, obtained the same happy results."

Drs. Barraut and Tessier consider that these results demonstrate that intermittent fevers are due to the presence of microscopic ferments, animal or vegetable, in the blood.—*Union Medicale.—Medical Press and Circular.*

Detection of Mercury in poisoning.

The following method is said by the *Brit. Med. Journal*, to be employed by M. Buchner in searching for mercury in the remains of a person poisoned by corrosive sublimate. The organic remains having been disintegrated by a hot mixture of chlorate of potash and hydrochloric acid, the solution is diluted and saturated with sulphuretted hydrogen. After some hours, the sulphide formed is collected, dissolved in aqua regia, and reduced by evaporation to a small volume. A little water being added, a bright piece of copper wire is placed in the liquid, and when mercury is present, the wire becomes gray, at the latest in two days. The copper is withdrawn, dried between folds of blotting paper, and heated in a wide test tube. The mercury is more easily distinguished by removing the wire, and placing in a tube a drop of tincture of iodine. M. Riederer having remarked that the sulphide of mercury which is formed by this process always contains organic matter, has recourse to dialysis. He operates in the following manner. After disorganization by chlorate of potash and hydrochloric acid, the mercury in solution is precipitated by sulphuretted hydrogen, the sulphide collected, dissolved in a mixture of chlorate of potash and hydrochloric acid, and dialysed with 500 c. e. of water. At the end of five days, the water is evaporated, and the dialysis repeated. After this treatment, the solution is again saturated with sulphuretted hydrogen; the precipitate is washed with ammonia and sulphide of ammonium, then with weak nitric acid, and finally treated afresh with hydrochloric acid,

and chlorate of potash. Operating upon dogs with calomel, M. Riederer has recognised that the greater part of the mercurial compound is eliminated by the excrements.—*Medical and Surgical Reporter.*

Poisoning by Absorbtion of Carbolic Acid.

E. S. MACHIN, Esq., (*British Medical Journal*), refers to three cases of itch where the parts were dressed with carbolic acid and symptoms of poisoning ensued, consisting of smarting pain at the point of application, head-ache, and coma. Two of the patients actually died, and the third was only rallied with considerable difficulty. The acid used was that known as Calvert's, and about six ounces were employed upon the three cases.—*Medical Record.*

ANATOMY, PHYSIOLOGY AND PATHOLOGY.

COLLATED BY S. S. HERRICK, M. D.

IN the London *Medical Times and Gazette* a Case of Larval Tapeworms in the human brain is reported by C. Lawrence Bradley, F. R. C. S., surgeon to the Pentonville Prison. The patient had phthisical symptoms with diarrhoea, and died from exhaustion. The *post mortem* examination gave the following results:—Body emaciated. Head: Pachionian glands considerably developed, thinning the dura mater and indenting the calvarium in the mesian line. Subarachnoid effusion upon the surface of the hemispheres. On removing the pia mater numerous cysticerci were discovered packed separately between the convolutions of the hemispheres. They appeared as bladders distended with fluid, the size of filberts, some transparent, others more or less opaque. There was one in the meshes of the choroid plexus in each lateral ventricle, and one in the third ventricle, smaller ones also between the laminæ of the cerebellum. Altogether, I estimated their number at twenty. There were none found in other organs. The lungs were tuberculous, but without vomicae.

The case is interesting from the entire absence of cerebral symptoms, for during the period referred to the prisoner never complained of pain in the head, giddiness, or other symptoms of cerebral irritation, and he retained his mental faculties unimpaired until just before his death.—*Boston Medical and Surgical Journal.*

Aspermatism. By W. H. Van Buren, M. D., Professor of Principles of Surgery, and Diseases of the Genito-urinary System, Bellevue Hospital Medical College, New York.

A gentleman, 30 years of age, whose wife had not conceived after four years of marriage, was brought to me by the late Dr. C. E. Isaacs, in May, 1858, and, being exceedingly anxious for a family, he desired to ascertain if anything could be done to improve his sexual power.

He was a spare-built, under-sized man, but healthy and strong, and very straightforward and truthful in his manner.

He complained of the occurrence, at intervals of from two to six weeks, of erotic dreams, attended by profuse seminal emissions, and followed by a sense of weakness; also, of the escape of a "clotted glutinous fluid"—evidently seminal—from the urethra after passing water, about every other day, and most noticeably in the morning on rising. Now comes the curious feature of the case: He had never been able, in sexual intercourse, or in any other way, to bring about the genereal orgasm, or to provoke a discharge of seminal fluid. He had prolonged the effort, on many occasions, to the full extent that his strength would permit, but with no result. At present he experiences no pleasure in the sexual act, rather a feeling of disappointment, indulging (if this expression can be properly used in such a case) but once in a month, and then only as a matter of duty, and in the hope of a more successful issue.

In his dreams he is conscious of full orgasm and free emission; but he has never had this happen to him when awake,—so that the only knowledge he possessed, as to the nature of the complete venereal act, had come to him in his dreams. He had never attempted to provoke an emission by unnatural means; had never experienced any desire to do so, and would not know how to go about it.

The case of this gentleman was a novel one to me, and I was able to suggest no remedy but circumcision, as his prepuce was very long, and I thought that it might interfere with the physiological performance of the sexual function. This was done by Dr. Isaacs, but the result was negative. The patient returned some two months afterward, to report tome that his disability was still unrelieved.

I have never encountered a second well-marked case of this curious functional defect, nor have I seen any mention of it by any writer in the English language; but in the *Traite de l'Impuissance et de la Sterilite* of Dr. Felix Roubaud (Paris, 1855), I find several cases, evidently authentic, detailed at length. Their features coincide very exactly with those of the case I have detailed. The inability to accomplish the sexual act at will, although with perfect erection, and the occurrence of full emissions during the unconsciousness of sleep, are mentioned in all.

Roubaud's treatise is thoroughly scientific in its character, and

one of the best works on the subjects of impotence and sterility of which I have any knowledge. He gives the disease the rather unsatisfactory name of "Aspermatism," which is not literally correct, for it is characterized not by *absence* of the seminal fluid, but by the *impossibility* of its *ejaculation* under circumstances necessary to secure impregnation of the female. It is described as an affection entirely distinct from "priapism," and also from "erotomania."

A case is related by a Scotch physician, Dr. Cockburn, in his "*Essais et Observations de Medicine d'Edimbourg*," Paris, 1740. Another is to be found in the *Gazette de Santee*, No. 52.

The only pathological explanation which accounts for all of the phenomena in this unusual affection would seem to be an exaggerated spasmotic contraction of the muscular fibres in the walls of the ejaculatory ducts, leading to their occlusion under extreme excitement. If another case of this kind should occur to me, I would suggest the trial of a suppository of opium and belladonna, and an attempt at intercourse under its influence.—*New York Medical Journal.*

The Bony Marrow as a Blood-Forming Organ.

MANY of our readers, mindful rather of that succulent dainty, a marrow-bone, than of the nature of the structures which constitute its texture, may be inclined to smile at the above heading, yet in support of their belief MM. Bizzozero and Neumann, who have been chiefly engaged in the research, have been able to array a goodly rank of facts. Hitherto it has been supposed that the marrow of the bones of quadrupeds, like the air in the hollow bones of birds, was intended to constitute a light padding rather than to fulfil any definite function, until in 1865 Bizzozero drew attention to the peculiar character of the red bony marrow of frogs. Now it is this reddish substance found chiefly in young subjects or in animals growing rapidly, not the fatty marrow of more mature individuals, which is held to be the blood-producing organ in question. The first thing noticed was that certain of the cells in the red marrow presented amoeboid movements similar to those observed in the white cells characteristic of lymphatic glands. These globules are very numerous, and have been described by M. C. Robin as *Medullo-cells*. In structure they appear to be identical with the white corpuscles of the blood. But besides these bodies there are others to be seen in the bony marrow which are not only structurally similar to the white corpuscles of the blood, but which also possesses a distinct yellow or red color—in short, which are supposed to be intermediate products between white and red corpuscles. The characters of these red corpuscles are not constant; some appear to be larger, others

smaller, some lighter, some darker red; their shape and their elasticity would also seem to vary in like manner. Such variations are held to indicate degrees of transformation from white into red blood-corpuscles, as seen in the frog.

Having settled, then, the existence of such elements in the bony marrow, we should next consider the peculiar structure of the marrow tissue, and see whether it bears any relation to the glands which are believed to be most concerned in the elaboration of blood. In the red marrow of bones, capillaries are numerous, and of considerable size, about six times that of those found in muscle. The marrow-arteries are always *smaller* than the capillaries in which they terminate. Each artery speedily terminates in a large bundle of big capillaries, so that they seem suddenly to dilate like a funnel, whilst the capillaries appear to pass slowly into veins. Such an arrangement must produce a speedy and important influence on the rapidity of the current of blood passing from the arteries into the capillaries, for the stream will become slower as the containing channels widen. Further, in those wide capillaries M. Neumann says he has discovered the corpuscles we have described as intermediate between the white and red corpuscles of the blood. In the frog the bony marrow is almost entirely fatty in winter and red in summer, and during the spring months the blood which leaves the large bones presents a brownish instead of a dark-red appearance. This is found to be due to the number of white and intermediate corpuscles then contained in the outgoing current. As to the marrow tissue itself, it closely resembles the so-called adenoid or cell-forming tissue of His, consisting of masses of the cells already described enveloped in a very fine meshwork of connective tissue. This tissue, then, is held to be the field where the cells are produced, and when they undergo certain of their changes; they closely surround the capillaries, and are also known to be abundant within them. The amoeboid movements these cells exhibit even under the microscope, and Cohnheim's doctrines as to the changes which take place in the capillaries of an inflamed or irritated—that is, an abnormally active—part, will readily explain the mode of their transmission from the outside to the inside of the vessels. Finally, to complete the chain of metamorphoses, Bizzozero, in a recent contribution to the *Gazette Medica Italiana*, has pointed out the existence of bodies which would also seem to indicate the destruction of the red blood-corpuscles in the bony marrow. Thus, whether it is true or no that the bony marrow is a blood-forming organ, it is quite evident that it is a much more important structure than has been supposed. M. Henoque, in an excellent article on the subject in the *Gazette Hédomadaire*—an article which we have chiefly followed—points out the important bearings these discoveries have on the changes known to take place in the bone in connexion with certain diseases, as scrofula, rickets, etc., and also on the effects which certain bony tumors

have on life. The whole question is one of interest, and deserves careful elucidation.—*Medical Times and Gazette.*

Description of a New Ligament.

O. LANNELONG and A. LeDeutu—(*Arch. de Physiol. Norm. et Pathol.* 1. 448-450)—describe a ligament which arises from the posterior layer of the sheath of the sterno-thyroid muscle, inserts itself at the inner surface of the first rib, behind the sternoclavicular articulation, and is thence continued to the anterior surface of the pericardium. This band includes the remains of the thymus gland. It serves to fix the pericardium at its anterior portion, and is the counterpart of the “ligamentum vertebro-pericardiaceum,” described by Béraud, which attaches the posterior surface of the pericardium to the spinal column.
—*Medical Press and circular.*

A Man with Two Hearts.

THIS man lives in Hartford. He is about fifty years of age, and is able-bodied. He had lived upward of thirty-years before the phenomenon was discovered. The singular feature of the case is that there are separate connections between the two hearts, and the best authorities who have given the subject attention agree in saying that the smaller organ performs the general functions of the body in all blood relations, while the larger appears to have a distinct existence in that matter, and only operates upon the nervous system through peculiar mechanism not entirely unfamiliar to the profession. This latter organ shows frequent unusual activity, and gives evidence of a lurking disease, which it is said, will, sooner or later, carry the man to his grave. The lesser organ, dependent only upon the greater in such degree as the several organs of physical life are dependent for perfect working upon the healthful regulation of the whole mechanism, has been found to be in an almost perfect state—the same as ordinary persons in good health who are disturbed by the presence of a second organ. The effect of this second presence upon the person alluded to is at all times melancholy beyond description. If it has a quick, active motion, showing the presence in the arteries of a superabundant quantity of blood to vitalize the latter organ, the man exhibits considerable electricity of spirit; but this is only temporary; more frequently there is a sluggishness in the nervous connections, which is followed by loss of sleep and great petulence in wakeful moments. Sometimes the larger organ is full and lively. On such occasions the family of the man find him a most agreeable companion. However, he betrays a mild

form of insanity, which it is feared may develop into something worse. So severe has been some of his paroxysms of late, that a council has been called, and it has been decided that the larger heart may be removed without in the least disturbing the blood relations of the body; but the man, who has been approached on the subject, declares that of the two organs he would rather have the vital one of the body taken out, which cannot be done without producing instant death. This organ is situated under the vest watch pocket of the man, the other is in his pocket where he carries his cash.—*Hartford Courant*.—*Druggist Circular and Chemical Gazette*.

Source of Free Hydrochloric Acid in the Gastric Juice: By Prof. E. N. HORSFORD.

THE long-disputed position of Prout, that the gastric juice contains free hydrochloric acid, was at length established by C. Schmidt, who, in an absolute quantitative analysis of the juice, found about twice as much hydrochloric acid as was required to neutralize all the bases present.

The prolonged discussion of this subject, now since 1823, has brought to light, through the researches of Lassaigns, Claude Bernard, Schwann, and numerous others, the unmistakable evidence of the presence of lactic acid and of the acid phosphates in the gastric juice, which latter might or might not be due to the presence of lactic or hydrochloric acid.

A point of special interest to the chemist and physiologist still remained, and was this:

How could free hydrochloric acid be secreted from the blood, which is an alkaline fluid?

The blood, freshly drawn, consists of a fluid (the plasma), in which there are swimming myriads of exceedingly minute, irregularly spheroidal bodies (the corpuscles). The plasma consists of two bodies—one of which, the fibrin, spontaneously separates from the other, the serum. The corpuscles are little sacs of delicate animal membrane, enclosing a fluid. This fluid has an acid reaction, and its ash contains a monobasic alkaline phosphate. The fibrin of the plasma contains, according to Virchow, a glycero-phosphate of lime, though the plasma, as a whole, has an alkaline reaction, and contains, in its ash, a great measure (eleven per cent.) of chloride of sodium.

The moist corpuscles constitute about one-half of the blood.

In healthy digestion, the blood-vessels of the stomach are engorged. Engorgement is the equivalent of obstruction. This must occur in the capillaries, where the diameter of the blood-vessels is least. The plasma, because of its fluidity, must move more freely than the corpuscles. The proportion of the corpus-

cles in the capillaries will be thereby relatively increased. Under the pressure that follows, the fluid contents of the corpuscles will pass through their membranous walls, and, mingling with the relatively lessened plasma, pass on through the walls of the capillaries. This mixture will therefore contain acid phosphates and chloride of sodium.

The mucous membrane of the stomach presents, on its inner surface, the mouths of numerous microscopic tubes, which, like stockings, are sometimes single blind sacs, or, like gloves, terminate in several blind sacs, like glove fingers. In the bottoms of these tubes, and along their sides, are several closed spherical sacs, containing other lesser sacs, and fluid within. The tubes, as a whole, dip down into the spongy tissue that underlies the mucous coat, where they are surrounded by fluid, poured from the network of nutritive capillaries, which fluid, as remarked above, contains acid phosphates and chlorides.

Now by pressure and osmosis, a portion of this fluid will pass through the walls of the gastric tubes, and the question is—

Whether the fluid that goes through will contain free hydrochloric acid?

The experiments I have made are conclusive on the principal point.

By employing acid phosphate of lime and common salt, I had this advantage, that as increased acidity on the one hand is a just inference from increased alkalinity on the other, and as increased alkalinity would be shown by the precipitation of phosphate of lime—a visible white powder—I could determine the qualitative fact without the difficulties and delay attending on accurate quantitative analysis of the solutions before and after the experiments, on both sides of the membrane.

I employed an acid phosphate of lime of specific gravity 1.117—of a constitution of $3(\text{CaO PO}_5) + 2\text{PO}_5$ —with an amount of phosphate of peroxide of iron present, as one to twenty-eight of the acid phosphate of lime. The other solutions employed were the ordinary laboratory reagents.

On adding ammonia, in small quantities, to the solution of acid phosphate, with alternate agitation, it required, as might be inferred, several repetitions before the peroxide, with its phosphoric acid, became a permanent precipitate, and still several more before the precipitate of phosphate of lime became permanent.

In my early experiments, in which I employed parchment-paper, I was embarrassed with the presence of sulphate of lime in the precipitated powder, so that what was at first supposed to be phosphates of lime and iron, was found to be, in part, sulphate of lime. This sulphate was due to imperfectly-washed parchment-paper, which still contained sulphuric acid. This difficulty overcome, the experiments were made with parchment-paper, prepared from German and Swedish filter-paper, as well as with gold-beater's skin (animal membrane).

I employed the acid phosphate of the formula above, with (each by itself) chloride of sodium, chloride of ammonium, chloride of potassium, chloride of magnesium, chloride of calcium and acetate of potassa.

With all of these, there was obtained the same kind of evidence of increased acidity on one side, and of increased alkalinity on the other—to-wit, the powder thrown down from the mixture of acid phosphates and chloride. What successive additions of ammonia had been required to effect, had been accomplished by dialysis.

The same effect took place from a mixture of acid phosphate of soda and chloride of calcium.

It follows from the above, if these experiments fairly represent the case, and from the known composition of the blood, its condition in the walls of the stomach, and the structure of the gastric tubules, that free or uncombined hydrochloric acid must find its way into the bottoms of the gastric tubules, and thence into the cavity of the stomach.

It may be urged that I should show that the acid phosphate, pressed from the corpuscles, more than neutralizes the alkalinity of the plasma present. In reply, it may be said that I present a condition of things in which there is the *kind* of physical change, required *going on*—namely, relative augmentation of the corpuscles, under pressure, the concomitant of engorgement. Its *degree* must be inferred from the effects on the secretions, which I have endeavored to point out, by conducting an experiment under what I conceive to be essentially like conditions, and obtaining the result due to identical conditions.

The secretion of hydrochloric acid is, of course, mixed with acid phosphates and alkaline chloride.

That such a result, as above arrived at, would follow experiment, might have been predicted from Graham's researches in dialysis. Phosphates of lime and soda are colloidal, relatively, to more crystalloid hydrochloric acid. Graham found that bisulphate of potassa, by dialysis, was resolved into two salts, or mixtures, of greater and lesser acidity than the original bisulphate. So he found that acetate of peroxide or iron was resolved by dialysis into hydrated peroxide of iron, and free acetate acid. It is possible, and probable, that the albuminoid bodies present take part in determining the contrast between colloid and crystalloid bodies. Graham found that, by dialysis, he could separate free hydrochloric acid from the gastric juice, thrown up by vomiting.

It may be further objected that anatomists are not agreed as to the structure of the corpuscles. But it will be seen that there is no more required than may be regarded as established. The corpuscles act in many particulars, if not in all, as if they were membranous sacs, more or less distended with fluid. They may be swollen by immersion in a thinner (less colloid) fluid, and re-

duced by immersion in a more colloid fluid; that is, they are susceptible of endosmosis and exosmosis, as membranous, saecula would be. In their ordinary condition, as seen under the microscope, they present the appearance of collapsed spherical or oval saecula or cells. They appear as double concave disks. In swelling (by endosmosis) the lower part of each concavity is the last to take on the spherical contour, as they would do if they were membranous saecula. The corpuscles sometimes so collapse (by exosmosis) that one-half of the hollow sphere is reversed while the other half retains its form unchanged, the former sitting like a cup in the latter—a conformation inconceivable on the theory of homogeneity of the corpuscles as a whole. Crystallizable substances may be extracted from the corpuscles by pressure and by endosmosis. They must have been in solution in order to crystallization, and solution involves a fluid.

The liquid expressed from the corpuscles has an acid reaction and contains an organic acid and acid phosphates. It contains among other bodies the haematoïdin of Virchow. The ash of these crystals consist almost wholly of metaphosphates which point directly to tribasic phosphoric acid in solution, combined with one atom of fixed base, which is inconceivable unless separated by membrane from the plasma, which is always alkaline.

In fine, whatever other peculiarities the blood-corpuscles may possess, they have the requisites for furnishing acid phosphates in solution, under pressure such as must attend engorgement of the capillaries in the walls of the stomach.

Let us glance at what takes place in all probability as the acid fluid enters the gastric tubules. Here are saecula containing fluid at the bottom and along the sides of the tubules. They are surrounded by a mixture of hydrochloric acid, acid salts, neutral salts, and albuminoid bodies. Dialysis must be repeated and a stronger acid solution pass into the saecula. The saecula, swelling by endosmosis and corroded by the acid, must at length burst, and the liquid contents, together with the disintegrated and partially digested membrane of the saecula, pass out to the stomach to constitute the gastric juice—the free hydrochloric acid, acid phosphates and chlorides, and the albuminoid bodies and disintegrated tissue (the pepsin?) to act in the liquefaction of food.—*New York Medical Journal.*

New Experiments on the Production of Tubercle.

In the last number of Virchow's *Archiv*, which has just come to hand, is contained an account of an extended series of experiments by Cohnheim and Frankel, relating to the inoculation of tubercle, which in every respect confirm the results arrived at by

Dr. W. Cox and Dr. Burdon-Sanderson a year ago. Having first satisfied themselves as to the entire identity of the lesions with miliary tuberculosis in man, both as regards the naked-eye characters and the microscopical structure, they direct their attention to the question whether or not they are due to a specific virus. With this view they introduced into the peritoneal cavities of guinea-pigs minute portions of various morbid growths, as well as of healthy tissues obtained from the post-mortem theatre. The results agreed entirely with those described by Dr. Fox in his lecture last May. Not satisfied with these results, they introduced into the same cavity portions of india-rubber, of charpie, or of paper. The results in all cases were the same. A caseous abscess enclosed, in a vascularized capsule, was always formed at the seat of insertion, while the peritoneum, lungs, liver, and other organs were the seat of unequivocal miliary tuberculosis. From these facts the author drew the same inference as that arrived at by Dr. Burdon-Sanderson in his communication to the Pathological Society last April—namely, that the infective material, whatever may be its chemical or physical properties, is contained in the caseous pus which in the guinea-pig is always to be found in greater or lesser quantity in the neighborhood of inoculation wounds. For the purpose of testing the truth of this surmise, the authors varied their mode of experimentation. In several guinea-pigs a liquid consisting of caseous pus, diluted with a solution of one part of common salt in two hundred parts of water, was injected into the jugular vein. All became tuberculous. Fresh whipped blood was then injected into other animals in the same way, and finally, in another the operation preliminary to injection was performed without injecting anything. The results were the same throughout. All had abscesses at the seat of injury, and all eventually died of miliary tuberculosis. The authors went a step further. Knowing that whereas in the guinea-pig any external wound, however inconsiderable, is apt to produce suppuration, and slight injuries very rarely produce this effect in the dog, they repeated the same experiments on this animal. The result confirmed their anticipation. The injection of caseous pus always produced general miliary tuberculosis. It was not necessary to repeat the negative experiment, for the every-day experience of the physiologist teaches that in dogs the mere operation of injection by the veins is never attended with any consequences.

The terms in which Drs. Cohnheim and Frankel formulize their conclusion, "that tuberculosis is due to the entrance of dead and inspissated pus into the circulation," are not the same of those employed by Dr. Sanderson, who attributes it to the "caseous softening" of the primary local induration, and considered that, in inoculation under the skin, subcutaneous suppuration was the essential condition of infection; but we do not see that there is any essential difference between the two explana-

tions. It is proper to add that the Berlin experiments were begun in 1867, and were carried out in entire ignorances of those made in London. Indeed, the authors do not appear even yet to have seen more than a mere abstract of them. The only reference to them which their paper contains is the following:—"Experiments have been very recently published by two English authors, Sanderson and Fox, the results of which harmonize very well with ours. Truly it appears as if in Germany pathologists are scarcely more conversant with our literature than we are with theirs.—*Lancet*.

Note on the Pathology of Hepatic Abscess. By C. MOREHEAD, M. D., F. R. C. P., Edinburgh.

Dr. BUDD, in his work on *Diseases of the Liver*, published in 1845, concluded from very limited data, that abscess on the liver depended, if not exclusively, most generally on intestinal ulceration—in other words, that it was pyæmic in its origin. In my *Clinical Researches*, first addition, published in 1856, it was contended that, though hepatic abscess caused by pyæmia might be an occasional occurrence, the theory could not be accepted as generally correct; because, in my own experience, there had been fifty fatal cases of dysenteric ulceration without hepatic abscess, and seventeen cases of hepatic abscess without ulceration of the intestine. In the second edition of my work, published in 1860, the same statement is repeated, with the addition of four to the cases of hepatic abscess without ulceration.

In the report of the European General Hospital of Bombay, for the year 1859, published in the *Transactions of the Medical and Physical Society of Bombay*, in 1860, Dr. H. A. Lieth remarks:—"On arranging all the cases in which dysenteric ulceration, all in which hepatic abscess was seen after death, there are found dysentery without hepatic abscess in thirty, dysentery with hepatic abscess in five, and hepatic abscess without dysentery in four instances. If all such cases that have occurred in this hospital during the last three years be added to those given in Dr. Stowell's decennium of the hospital statistics, recorded in the *Transactions of the Medical and Physical society*, 1855-6, there will be the aggregate of—dysentery without hepatic abscess 188; dysentery with hepatic abscess 50; hepatic abscess without dysentery 41." Adding these figures to my own, we have 238 of dysentery ulceration without hepatic abscess; and 62 of hepatic abscess without ulceration of the intestine—sufficient, I apprehend, to disprove the pyæmic theory. I recur to this subject at present, because Dr. Leith's statement has only now, for the first time, caught my attention, and it is of importance that there should be no doubt of a pathological error which Dr. Budd still teaches without modification or reserve in an addition of his work published subsequently to my *Clinical Researches*.—*British Medical Journal*.

MEDICAL NEWS AND MISCELLANEOUS.

The Dangers of Enameling.

THAT the dangers to which enamelers of cards and other articles are exposed are not imaginary, was proved in the instance of two cases brought under the notice of the Medical Society of London, on Monday last, by Dr. Oppert. One case was that of a man of middle age, who had been in the trade for twenty-six years, and exhibits at the present time decided and severe symptoms of lead-poisoning. There is the unmistakable blue line along the gums, and, in addition, loss of sensibility and mobility of the left arm and leg, so that the gait is unsteady. The second case was that of a man who used a compound of white lead and sulphur for the purpose of glazing the straw hats that are imported from Florence. He also possesses the blue line alone the gums; but the absence of any severe symptoms of poisoning is due to the use of the antidote with the poison. The materials used by the former of the two patients have been placed in our hands by Dr. Oppert, and they consist of arsenite of copper (the employment of which is stated to be followed by bleeding from the nose) and oxide of lead. Here, at any rate, are two undoubted instances of metallic poisoning in the case of men employed in the glazing of cards and straw hats. It is, of course, impossible to say how much mischief of a similar kind escapes detection. We have known enough for some time to feel that some protection should be afforded to workmen engaged upon the use of dangerous colorants in manufactures.—*Lancet.*

WE notice that two manufacturers of sausages were recently brought before a magistrate for having used pieces of diseased meat, described by the medical officer for Hackney as utterly unfit for human food. In one case Mr. Ellison sentenced the defendant to a fine of £20 and costs (£3 16s.), which sums were immediately paid; and in the other, he sentenced the defendant to three months' imprisonment with hard labor, without giving him the option of paying a fine. If all magistrates were to act as Mr. Ellison did in the last case, when a conviction was secured against persons charged with these offences, there would soon be an end to them. The meat used in the preparation of the sausages was proved to have been bad and diseased in these cases; but occasionally sausages may, under certain circumstances, develop a poison, the exact nature of which has not yet, we believe, been determined. Chemists have not been enabled to isolate it. It is probably some organic principle or product induced by some change of septic character taking place in the ingredients of which the sausage is composed.—*Lancet.*

The Double Salts of Carbolic Acid.

At the meeting of the Royal Medical and Chirurgical Society, held last Tuesday, an interesting paper was read by Dr Sansom, on the properties of the double salts of carbolic acid. When the acid is used in an uncombined state, is very caustic in large doses, and even when much diluted, it has a very irritant action. To obviate this, and yet retain the antiseptic properties of the acid, the author has prepared a series of definite compounds, in which sodium, zinc, or magnesium take the part of bases in conjunction with the sulphuric and carbolic acids. These salts are crystalline, readily soluble in water, have a distinct odor of carbolic acid, and when treated with a few drops of a solution of perchloride of iron, give a dark-red color, due to the sulpho-carbolate of iron.

Mr. Crookes, in his paper in the "Cattle Plague Report," has shown most conclusively that carbolic acid has the power of destroying living germs; it will prevent the growth of the yeast fungus; it will destroy, also (he believes), the germs in zymotic diseases. When the expired air of an animal suffering from the cattle-plague was passed through a tube, which was loosely plugged with cotton-wool, the germs of the disease were entangled among the fibres. A plug so prepared, was inserted under the skin of a healthy cow, and in a short time it suffered from the disease. If, however, the wool has been previously soaked in a solution of carbolic acid, no effect whatever seemed to result when a healthy animal was inoculated as in the first case. From these experiments, it seemed to follow—1, that the actual poison which caused the disease was a material substance, which could be collected; and, 2, that the noxious properties of this substance could be destroyed by carbolic acid, or by substance possessing like properties. It naturally occurred to medical men, that a similar method of treatment might be of avail in zymotic diseases, or in the treatment of external wounds. Yet these hopes have not been fulfilled; and another time we shall attempt to show why this method of treatment has not been of as much use as was expected in curing zymotic diseases.

Dr. Sansom has found that the sulpho-carbolate of soda is the best salt to be given, and has prescribed very large doses, without producing marked effects of any irritant action. When this salt is administered internally, carbolic acid cannot be chemically detected in the urine, but only the sulphate of soda. When a person has taken the salt for some time, the urine becomes of a greenish tint, and will keep for a much longer period than usual without decomposition.

The author by no means proved that, as yet, any real good had followed from using these salts, nor did he give any cases of fever in which the course of the disease was cut short by the drug. In the discussion which ensued, the speakers had a vague idea that a better result had followed the use of the salt than when other

remedies were given; but some, who had watched the of action the preparation in typhoid fever and pyæmia, and had carefully noted the course and duration of the disease, came to the conclusion that no benefit at all had resulted. Carbolic acid is no doubt, most valuable in preventing disease; but whether, when the poison has once entered the system, it can then destroy it, is a question which can only be solved by experience. Our own observations would tend to make us by no means sanguine; but the treatment is one which should be fairly tried, and for this purpose the temperature of the diseases should be taken, as well as accurate notes of the cases, so as to see if these salts have any decided effect on the course of the disease.

DR. ROBERT LEE has placed his valuable series of dissections of the nerves and ganglia in the Anatomical Museum of the University of Cambridge, where they are easily accessible to any anatomists who may desire to examine them.

A GOOD deal of interest has been excited in the question of Vesical Absorption as a physiological phenomenon and therapeutic means, by the notes on the subject which have recently appeared in the British Medical Journal. On Wednesday, Sir Henry Thompson calls in question the accuracy of his previous statement in public lectures, that there is practically no power of absorption resident in the lining membrane of the bladder. To illustrate the fact, Sir Henry injected half a fluid ounce of liquor opii into the bladder of a patient. An hour afterwards, there was not the least sign of narcotism.—*Brit. Med. Jour.*

The Recent Epidemic of Typhus in Naples.

THE epidemic of typhus which recently prevailed in Naples has now almost completely died out. The Italian journals give the following statistics of the havoc which was created, and show how dearly the non-observance of sanitary law is paid for by a neglectful population. Our readers need not be informed of the filth and foulness which pollute Naples. Up to the date of August 31st, at which time the epidemic had lost its intensity, the various hospitals had received 5151 patients, of whom 603 died, making a proportion of 11½ per cent. The number of cases observed in the town amounted to 2708 cases, of which 683 terminated fatally, thus giving a proportion of about 25½ per cent. The total number of cases amounted to 7859, with 1283 deaths; in other words about 16½ per cent. mortality. It is curious to note that the mortality in the town was double that which occurred in the hospital—*Lancet.*

Consumption of Horse-Meat in Paris and Berlin.

THE sale of horse-meat has not taken so well in Paris as might have been expected from the first success of the undertaking. We are informed by the official accounts, which have just been published, that during the last twelve months the number of horses slain in Paris amounts to 2490. Out of this quantity five per cent. have been employed in making sausages, etc., whilst forty per cent. have been sold to the small *restaurants*, and ten per cent to the poorer classes. It may thus be seen that the quantity of horse-meat knowingly consumed as such in Paris is very small. Indeed, even the poorest people in that city manifest a strong aversion to horseflesh.

The number of horses slain in Berlin during the same period of time amounts to 4044, thus forming almost double the number slaughtered in Paris. But it may be well to add that the Berlin dyers are now making an extensive use of horse-blood.—*The Lancet.*

Carbolic acid in Malarious Fever.

FROM a dispatch which has been forwarded by Sir Henry Barkly to the Colonial Office we learn that Dr. Barraut, the acting Sanitary Inspector at Mauritius, and Dr. W. H. Tassier of the same place, have been not only using carbolic acid extensively as a disinfectant, but they have been employing solutions of the pure variety, prepared by Messrs. Calvert & Co., in the direct treatment of the fever cases in the epidemic in that island. These gentlemen speak highly of the therapeutical powers of the acid in intermittent fever. It was employed by them in two ways. One grain of the pure medicinal acid in one ounce of water, with a little brandy or bitter effusion, was administered as a medicine three times a day, and with, it is asserted, remarkably good effect, the relapses being less frequent than after the use of quinine. It was chiefly in those cases in which the fit was ushered in by vomiting that Dr. Barraut found the carbolic acid acted with the greatest advantage. Another method of treatment was by hypodermic injection of a solution of the pure acid; and a table of twenty-seven cases is given in illustration of the effects, with the detailed account of others. The strength of the injection used by Dr. Tassier was sixty-four grains to four ounces of water, of which as much as from twelve to thirty minims were used at a time. We have elsewhere directed attention to the caution which is required in the use of this powerful agent, which, it must be remembered, is a poison; but this method of employing it, as well as the object in view, are, we imagine, novel. We must await the results of further trials before deciding as to the value of the practice. If these should be confirmatory of the experiences of Drs. Barraut and Tassier the discovery will prove both important and interesting.—*The Lancet.*

THE Registrar-General for Scotland states that small-pox has been almost unknown in that division of the Kingdom during the past quarter, as indeed during the whole of 1868. He attributes this immunity to the efficient working of the Scottish Vaccination Act.—*Lancet.*

Professor FRANCIS T. MILES, formerly Prof. of Physiology and Microscopic Anatomy in the Medical College, State of South Carolina, and more recently Professor of Histology and Physiological Anatomy in the Medical Department of Washington University, Baltimore, has been elected Professor of Physiology in the Medical Department University of Maryland,—Baltimore.

Trichinae in the Domestic Fowl.

Dr. Geo. S. Bryant reports, in the *Richmond and Louisville Medical Journal*, the finding, imbedded in the muscular coats of the stomach and intestines of the common domestic hen, of large numbers of entozoa, coiled in cysts in every possible attitude, and not unlike in appearance the trichinae found in the human muscle. He suggests that the disease known as "chicken cholera" is dependent upon the presents of these entozoa, and promises to continue and report investigations on the subject.

M. MONNERET, Prof. of Internal Pathology of the Medical Faculty of Paris, author of the "Compendium" and also of a well-known work on Practice, which is still unfinished, died in Paris, recently, of disease of the heart. It is somewhat singular that three members of the Faculty of the School of Medicine, of Paris, have died during the last year, leaving books unfinished.

ON the 23d of June, the court of justice at Berlin rendered judgment against a Prussian pharmacien, named Coehn, for furnishing bad medicines to the Prussian army when in Austria, condemning him to five years' imprisonment, a fine of 10000 thalers, suspension from his civil rights for six years, and the loss of his license (concession) as a pharmacien.—*Journal of Pharmacy.*

EDITORIAL AND MISCELLANEOUS.

Medical Teaching in New Orleans.

We are strongly impressed with the belief that the advantages of our city for the study of Medicine are not appreciated at their real value by the public of the great South-West. Heretofore, we have considered it unnecessary to urge specially the claims for our two Medical Schools, believing their well earned reputation before the war would be a sufficient guaranty of their excellence. Besides, this Journal is pledged not to become the organ of either School, and it its neutrality may have led some to suppose that this silence has been imposed by a painful sense of lost prestige and impaired facilities for teaching. This supposition gains strength from the fact that the registers of Northern Schools, for the present season especially, show a large proportion of Southern students. Other considerations also, may have been instrumental to this effect, and these shall receive attention in their place.

First, we wish to state most emphatically that the suspicion of a decline in our schools, either in the appliances to illustrate the various subjects of Medical study or in the *personnel* of the Faculties of instruction, is not justified by the actual facts. In both respects they were never before on a more efficient footing, and can proudly challenge comparison with any institutions outside of two or three of the oldest cities of the country. At the same time we claim certain local advantages which more than counterbalance all inferiority in other respects. It is to be remarked that the privileges of students in our great Charity Hospital are unequalled elsewhere. There is positively no restriction upon the students in visiting all the wards, with the exception of the female venereal and lying-in wards, at all hours, and every facility is granted for the personal examination and study of cases both in the presence of the clinical instructors and privately. The *internes* of this hospital, fourteen in number, are selected from the students in the two schools by competitive examination.

Here there are no public prejudices to obstruct the study of practical anatomy and experimental physiology to their fullest extent.

It is probable that the occasional prevalence of yellow fever in our city deters some students from coming here, but we think without good reason. Two great epidemics—those of 1853 and 1867—have taught the liability of a wide-spread visitation of this malady, and at the same time demonstrated the inability of most practitioners in the country and the small towns to encounter successfully such an invader. In view of these lessons, we think it incumbent on all who have any liability to meet this disease in

their practice, to study its treatment in this its favorite haunt. It is probable that nowhere else is the nature of this dreaded malady so well understood, and it is certain that its treatment is nowhere else so rational and successful. Not only is New Orleans the best place in the world to have yellow fever, but by all odds the best place to study it. The fear of meeting any disease which he may hereafter be called on to treat is more disgraceful to the medical student than cowardice in battle to the soldier; for entrance on the former career is always and completely voluntary, and not so in the latter.

The supposition that our city is generally unhealthy is unfortunately somewhat prevalent; but, we are satisfied is not confirmed by facts. Aside from epidemics of yellow fever the health of New Orleans compares favorably with that of other large cities in this country and with that of the surrounding country. Though founded on an alluvial deposit and still surrounded with paludal emanations, our city has gained in a great degree that immunity from malarial influences which large cities eventually win from unhealthy locations. Still all forms and types of this class of maladies enter the hospital and form a prominent share of its material for study. We are sure that no Northern School furnishes equal facilities for the practical study of the great malarial class of disorders which enter so largely into the field of practice throughout the South-west. And here we would impress most forcibly on the reader's mind, the advantage of studying diseases in their home, where, not only are their teachers *au fait* in their nature and treatment, but the opportunities for clinical instruction abundant. Without detracting from didactic lectures and systematic text-books, we assert that they alone can no more qualify one for the practice of medicine than for swimming.

It may be that late disorders and legislation, growing out of the disturbance of our political equilibrium, have operated to the disadvantage of our Medical Schools; but we can assure our readers that no city has been more orderly for the last three months, and that politics is no Goddess of Discord in our medical councils. To say more on this subject would only afford another example that "grievous words stir up anger."

We would be distinctly understood as deprecating any appeal to sectional pride or preference, or reflection on those who do not choose to patronize home institutions. Aside from the bad taste and questionable policy of such a plea, our home Medical Schools have no need to invoke the aid of the baser side of human nature to strengthen their claim for patronage. But while disclaiming all such arguments, we would again insist upon the importance of studying diseases in their own proper *habitat*, as far as possible, and especially such as the practitioner is sure to meet.

Besides, it should be observed that local causes tend strongly to modify diseases of general prevalence. For instance, malarial influences, in this part of the country, give a periodic type to

local inflammatory diseases, and produce a variety of general and local symptoms, which can be studied successfully only by actual and demonstrable examples. Thus paludal miasmas lend complications to the idiopathic fevers, to pneumonia and to dysentery, and act as the original cause of various neuralgic affections. It would be easy to tell the student that such things may happen, but it would be a grievous cost for his patients to give him the exemplification of all these interesting, but avoidable, phenomena, until he had practically studied them unaided and learned to treat them for himself.

In conclusion, it is proper to observe that the writer is not a medical teacher, either *in esse* or *in posse*, and that his interest in writing this is for the public good rather than the advantage of the Medical Schools of New Orleans.

American Medical Association.

WE present our readers with an analysis of the letters hereafter designated, relative to the approaching meeting of the Association in this city, regretting that we have not space for the entire text, as furnished by advance sheets of the Richmond and Louisville Medical Journal:

[LETTER I—From Dr. W. O. Baldwin, Montgomery, Ala., to Dr. E. S. Gaillard, Editor Richmond and Louisville Medical Journal.]

March 15, 1869.

From the fact that Dr. Gaillard was an active participant and deep sufferer in the late war, as well as a prominent member of the profession both before and since, Dr. Baldwin takes the liberty of referring to him as a representative of the professional sentiment of the South. For the same reason he addressed a communication to Dr. J. C. Nott, (formerly of Mobile, now of New York) who had relinquished his Professor's chair and a lucrative practice, in his declining years, for laborious duties in the war which claimed the sacrifice of two sons.

When men like Dr. Gaillard, Dr. Nott and Gen. Wade Hampton, after all their losses, can take the proffered hand of friendship and advocate reconciliation, for the good of science and the welfare of the country, personal allusion is pardonable, and those "who still urge discord and alienation" are put to shame.

[LETTER II—From Dr. Baldwin to Dr. J. C. Nott, of New York.]

March 2, 1869.

He urges Dr. Nott to be present at the meeting, commencing on the first Tuesday in May, and speaks of the pleasure it would afford his numerous and admiring friends to revive the scenes of

by gone days in a reunion upon Southern soil, probably the last for which an opportunity may be afforded.

An extensive correspondence for the last eight or nine months, justifies the conclusion that the great mass of the profession in the South is in harmony with the Association. The slight dissatisfaction manifested in certain newspapers, grew out of the action of the Association in 1864, on a set of resolutions introduced by Dr. A. R. Gardner, of New York. These remonstrated against the course of the government in making medical stores contraband of war, and they were laid on the table.

While these resolutions do honor to the purity and generosity of Dr. G., yet it is questionable how far others are justified, by the facts, in their comments on the action of the Association, and how far this body was committed to the support of the policy of the government.

He disclaims exemption for the Association from fair criticism in our professional literature, but deprecates the discussion of such matters in the secular newspapers, as not being of general interest and as calculated to bring discredit upon the profession.

While not prepared to state the usages of modern warfare touching this question, he is confident that the American Medical Association would have regulated it in accordance with the humane spirit of our profession, had the matter been left to its decision, but this was not the case. He takes the ground that the Association had nothing to do with this question, and that it could not be expected to put itself in antagonism to its government. The Association was concerned solely with scientific and professional matters, and this was a political and war measure, with which the Pope of Rome, the Grand Master of a Masonic Lodge, any humane individual, or any Christian and benevolent organization in the land had just as much to do.

A distinction is to be drawn between approval of a measure and failure to denounce it. The medical profession, while serving the cause of humanity, should not risk its consideration with the world by invading the province of others. However harsh the war policy of governments may seem to a civilian's ideas of humanity, when subject to military authority, we are not responsible for results. It is enough for us to labor within our own sphere for the good of humanity.

But suppose that the Association was really culpable in failing to remonstrate with its government, it would be unwise, at this day, to oppose its future and permanent interests by assaults which might compass its disorganization. The present high advancement of our science has been due to organized coöperation, and its future glory is involved in the harmonious pursuit of common objects.

The spirit of the Association has been, in all respects, honorable and kind to its Southern members during and since the war. He (Dr. B.) attended its last meeting, at Washington, from a sense

of duty, and there he solicited no office. Yet with a meagre representation from the South, they conferred on him its highest honor, rather out of magnanimity and kindness to the South than personal consideration for himself. This was done without inquiring into his political sentiments, though these had never been disguised.

The death of a son in the late war, the greatest sorrow of his life, finds alleviation only in the reflection that he died for the land of his birth; and finds no relief in cherishing bitterness against those who had been made the instruments of his affliction.

It is unwise and unprofitable to bring the temper of a partisan strife to the councils of science. If the gallant Gen. Hampton can forget his wounds and desolated home in recognition of a conciliatory spirit on the part of late enemies and for his country's good, shall we continue sectional and hostile towards a brotherhood, from whom we have experienced unvarying kindness and courtesy? If Prof. Gaillard, who lost his right arm on the field of duty, and at the same time all prospect of advancement in the special department of his choice, can advise that we cover the past "with the mantle of personal and professional charity," those without wound or scar ought to banish feelings which can neither benefit science nor honor our manhood. No one should suppose that our Northern brethren can gain any advantage from fellowship, which we ourselves shall not share.

The American Medical Association is destined to accomplish a greater good for the profession than has yet been achieved. Organized chiefly for the end of elevating the standard of medical education,—an object not yet realized—its efforts in this direction will yet be felt, but for this purpose *it must be national*.

From every section there is assurance of a determination to bury all other feelings in the effort to promote harmony and fraternal feelings. Tell our friends in the North that we desire to meet them in large numbers in New Orleans in May.

[LETTER III.—Reply of Dr. Nott, March 8, 1869.]

While attributing the terms of commendation used by Dr. Baldwin to personal regard, Dr. Nott believes that his efforts to uphold the dignity of the profession and endeavors to promote harmony, among its members are not over-estimated. He thought his labors had not been in vain, as they were not unrewarded, when, on leaving the scene of thirty years' practice in Mobile, he was presented with a piece of plate, engraved with the names of all the regular practitioners in the place.

He yields his approbation and sympathy to Dr. B., in his present effort, and has nothing to add to the letter, which he thinks will meet with a corresponding spirit in every quarter.

The construction put by Dr. B. upon the action of the Association on Dr. Gardner's resolutions, is the same as he has heard expressed by the profession generally at the North. Any debate

upon them would have led to discord, and would not the same thing have resulted if such resolutions had been brought before an assembly of a hundred physicians at the South?

On visiting Philadelphia, soon after the war, he was received politely by his medical brethren, who seemed more desirous than ever to extend hospitality. And when, a year ago, he settled at New York, determined to seek no favors, the respect and kindness extended, both in and out of the profession, could not be half told without imputation of egotism.

But admitting that the action of the Association was dictated by sectional and unchristianlike motives, we ought not now to decline the proffered olive branch. Medicine has not only been the art of healing, but the mother of all the natural sciences, and the fountain of civilization since the dawn of empire in Egypt.

Shall the physicians of the South be outdone in magnanimity? Will they suffer the remembrance of the war, in which we were all perhaps to blame, to cross the path of science, and thwart the objects of the American Medical Association? God forbid!

While heartily concurring in the *sentiments* expressed in the correspondence between Drs. Baldwin, Nott and Gaillard, of which the above is an abstract, and yielding to none in a sincere desire to see the medical men of our country united in cordial and zealous efforts to promote the welfare and support the dignity and honor of our profession, we are, on that very account, obliged to dissent from the *argument* employed. But as almost all of the rather lengthy correspondence is devoted to the expression of the *sentiments* we thus approve, what we have to say in regard to the *argument* will require but a few words.

We have hitherto carefully abstained from the expression of any opinion in regard to the action of the American Medical Association, in summarily and indefinitely tabling the very appropriate, well timed, and well expressed resolutions of Dr. Gardner, for fear that our motives might be misconstrued. We had hoped that the matter would have been discussed in full by those journalists whose motives were less liable to the misconstruction we apprehended, and who might be fairly regarded as more responsible than ourselves for the discredit such action of the Association is calculated to reflect upon the profession at large as represented by that body. But a marked reticence has been observed on the part of nearly all the journals, even since the subject was, in a measure, revived at the last meeting of the Association, by the passage of a resolution, which, while we cannot regard it as an *intentional evasion* of the subject, was practically of that nature, for it left untold the whole essence of the matter it purported to allude to, by means of a mere technicality. We cheerfully pass this by, however, when we bear in mind the kindly feelings which prevailed on that occasion, and which were well calculated to blind the better judgment of many who, upon calm reflection, would probably not have given their votes to a resolution which,

so far as true candor and strict veracity are concerned, is open to a harsh interpretation, to say the least of it.

With this explanation of the motives which actuate us, we proceed to cite the only argument by which Dr. B. attempts to defend an act which we cannot approve, and which, we must think, has reflected great discredit upon the Association, and through it upon the medical profession of America. His only argument is this, i. e. that it was none of their business. None of their business!! Was it none of their business to take such action as would render themselves and the profession at large, which they undertook to represent, the better able to discharge those high duties to science and to humanity, which we claim to be our cherished birthright? Resolutions looking directly to these objects, in every way appropriately presented, and at a time when incalculable good would, in all human probability, have been effected by their adoption, were laid before the meeting. An opportunity was then afforded that high body to show the world what spirit should actuate the soul of our great profession. That those then undertaking to represent that profession, failed to prove themselves equal to the emergency, failed to rise to the level of that dignity which the medical world had a right to expect of them, is a lamentable fact; and we venture to predict that nothing can save them from such a verdict from the profession they then *mis*-represented, when the whole bearing of the matter shall have been thoroughly and calmly considered.

The supposition of Dr. Baldwin that the adoption of the resolutions might have brought the Association into conflict with the government, and that the members, possibly, shrunk from occupying such a position, is sadly derogatory to the character of both, and we cannot for a moment entertain it. Who believes that any serious antagonism could have been induced by the recommendation of a policy not only in accord with the highest dictates of humanity, but looking directly to the relief of many of the sick and wounded of the government itself? The supposition impugns not only the humanity but the common sense of the government, and, if entertained by any considerable number of the members of the Association, affords only additional evidence of their failure to truly represent either a noble profession or a great people.

Prize Essays.

ALL Essays to be submitted for award of prizes at the coming meeting of the American Medical Association, should be forwarded to the undersigned as early as the 25th inst.

S. M. BEMISS,

Chairman of Committee on Prize Essays,

New Orleans, La.

Meeting of the American Medical Association.

We take pleasure in announcing to our readers and to the Profession of the South and West, that the next meeting of the American Medical Association will take place in this city, on the first Tuesday in May, and we would refer to the advertisement in another page for particulars in regard to the subjects which will specially engage the attention of the Association, so far as may be inferred from the reports of committees, etc., which are expected to be handed in.

We trust that there will be a large attendance, and more especially do we hope that the country tributary to this city will send a large delegation to assist us here in extending a most cordial welcome to those from the more distant sections. These reunions of the members of our profession are in every way advantageous, and all who can should attend them.

To attend the meeting it will not be necessary to be a regularly authorized delegate from some corporate body, as by the last clause in the advertisement alluded to above, it will be seen that any respectable physician may be made a member by invitation, upon the recommendation of the Committee of Arrangements.

The following gentlemen compose this Committee: Prof. T. G. Richardson, Prof. S. M. Bemiss, Dr. C. Beard, Dr. L. T. Pim, Dr. S. Choppin, and Prof. W. S. Mitchell.

Any communications for the committee should be addressed locked box 890, New Orleans, La.

American Antiquities.

WE have been requested by Dr. H. D. Schmidt of this city to solicit the aid of those interested in the study of American antiquities in assisting his friend Prof. Leidy of Philadelphia, who is at present investigating the subject, and is anxious to procure any such specimens. Very many such are to be procured throughout the South and West, and Dr. Schmidt as well as Prof. Leidy will be obliged to any gentleman who may have it; in his power to add to his present collection. If sent addressed as below, and if the donor's name be attached to the specimen, it will be duly forwarded by Dr. Schmidt, and thankfully received by Prof. Leidy. Address to

DR. H. D. SCHMIDT,
No. 10 Rampart street, 1st. District,
New Orleans, La.

We are pleased to notice from an exchange, the election of our friend Dr. R. Fraser Michell, of Montgomery, to the Presidency of the Alabama State Medical Association.

QUARTERLY Report of Deaths in the City of New Orleans, from 6 o'clock, A. M., on the 3d day of January, to 6 o'clock, A. M., on the 28th day of March, 1869.

DISEASES.	DISEASES.
Abscess of Kidneys.....	1
.. of Liver	3
.. of Lungs.....	1
.. of Lumbar	1
Albuminuria.....	4
Amputation.....	1
Aneurism.....	1
.. of Aorta.....	3
Anæmia.....	10
Angina.....	1
Asphyxia.....	1
Apoplexy.....	19
Asthma	7
Bronchitis.....	22
Burns or Scalds.....	22
Bright's Disease.....	1
Cancer	5
.. of Breast.....	4
.. of Stomach	3
.. of Womb.....	4
.. of Face	1
Caries of Bones.....	1
Catalepsy.....	1
Catarrh.....	6
Cholera, Infantum.....	4
Cirrhosis of Liver.....	2
Compression of the Brain.....	1
Congestion of the Bowels.....	3
.. of the Brain.....	26
.. of the Lungs.....	9
Consumption.....	133
Convulsions.....	35
.. Adult	1
.. Infantile.....	14
.. Puerperal	3
Cyanosis.....	1
Croup.....	6
Debility	21
.. Infantile.....	2
Delirium Tremens.....	3
Diarrhea.....	4
.. Acute.....	5
.. Chronic.....	12
Dropsy	13
.. of Brain	2
.. of Heart	5
Drowned.....	8
Dysentery	16
.. Acute	1
.. Chronic	7
Diphtheria.....	3
Dyspepsia.....	1
Epilepsy	4
Enterico-Colitis.....	5
Erysipelas	1
Enteritis	3
Exposure	1
Fever, Bilious.....	3
.. Congestive	10
.. Pernicious.....	9
.. Intermittent	7
.. Brain.....	4
.. Nervous.....	1
.. Panama or Chagres.....	4
.. Remittent	1
.. Scarlet.....	2
.. Typhoid	12
Fracture.....	1
.. of Skull	1
.. of Ribs.....	1
Frozen	1
Gangrene	1
.. of Stomach	1
.. of Lungs	1
Gastro Enteritis.....	14
Gout	2
Hæmorrhage	5
.. from Lungs.....	6
.. from Navel.....	1
.. from Womb.....	3
Heart, Disease of.....	25
.. Enlargement of	2
Hydrophobia	1
Hooping Cough.....	24
Hemiplegia	2
Inflammation	1
.. of the Bladder...	3
.. of the Bowels....	5
.. of the Brain	10
.. of the Kidneys ..	2
.. of the Liver.....	6
.. of the Stomach...	2
.. of the Throat....	2
.. of the Womb....	1
Influenza	1
Inanition	2
Insanity	2
Intussusception of Intestines.....	4
Killed Accidentally	2
Labor, Difficult	1
Laryngitis	2
Liver, Disease of	3
Lockjaw	18
Malformation	1
Marasmus, Adult	9
.. Infantile	12
Measels	24
Meningitis	18

Quarterly Report of Deaths—Continued.

DISEASES.		DISEASES.
Meningitis, Cerebro Spinal.....	2	Strangulated Hernia.....
Neuralgia.....	2	Suffocation.....
Old Age.....	20	Suicide
Paralysis	6	Teething.....
Peritonitis.....	3	Tris Nascentium.....
Pericarditis	2	Tumor of Liver.....
Pleurisy	2	Tabes Mesenterica.....
Pneumonia.....	84	Uremia.....
" Pleuro.....	3	Ulceration of the Bowels.....
" Typhoid	5	" of the Throat.....
Poison.....	4	Unknown
Premature Birth.....	30	Varecose Vein
Pemphigus.....	1	Worms.....
Rheumatism.....	2	Wounds
Scrofula	3	" Gunshot
Small-pox	5	Not Stated
Softening of the Brain.....	1	
Stillborn.....	90	
		TOTAL..... 1118

Males.....597. Females.....442. Not Stated.....79. Total.....1118.

White...684. Blacks 258. Mulattoes...106. Not Stated...70. Total...1118.

AGES.						
Under	1 year	257	40 to	50 "		120
1 to	2 years	40	50 to	60 "		85
2 to	5 "	73	60 to	70 "		57
5 to	10 "	28	70 to	80 "		38
10 to	15 "	12	80 to	90 "		9
16 to	20 "	28	90 to	100 "		6
20 to	25 "	38	100 and upwards.....			6
25 to	30 "	58	Unknown.....			188
30 to	40 "	125	TOTAL.....			1118

NATIVITIES.	
Africa.....	8
Canada	1
Denmark	2
England.....	10
France	35
Germany	67
Ireland.....	118
Italy	2
Madeira	1
Mexico	3
Poland	1
Prussia	4
Scotland	5
South America.....	2
Spain	2
Switzerland.....	2
United States.....	633
Unknown.....	19
West Indies.....	4
Not stated.....	204
	1118

January Issue.

As a very unexpected increase in our list of subscribers has entirely exhausted the January issue of the Journal, we will either credit the amount or refund the regular price to such of the subscribers as may see fit to forward that Number to us.

American Medical Association.

The Great Southern Mail Route will carry delegates to the Twentieth Annual Session, to be held in New Orleans, La., May 4th, 1869, at 11 A. M., and return, by excursion tickets, from New York for \$70. Tickets must be bought in New York, at 229 Broadway. Time, 84 hours.

Excursion tickets from Philadelphia by the same route, via the Philadelphia, Wilmington and Baltimore Railroad, to New Orleans, will be sold *only* by the Permanent Secretary, for \$66. Time 80 hours. Those desiring to go by this route must notify the Permanent Secretary immediately. Permission is given to stop at any point, and resume at pleasure.

The East Tennessee and Georgia and East Tennessee and Virginia Railroads, will issue excursion tickets at half fare over their roads.

The Mobile and Ohio, the Louisville and Nashville, and Memphis and Louisville, the Selma, Rome and Dalton, the Lexington Louisville, Macon and Western, South-Western, Jackson and Great Northern, Mississippi Central, the South Carolina and North Eastern, the Milwaukee and St. Paul, the Montgomery and West Point, the Mobile and Montgomery, the Virginia and Tennessee, the Richmond, Fredericksburg and Potomac, the Richmond and Petersburg, and Petersburg Railroads, will return free on certificate of Permanent Secretary.

The Steamship line from Philadelphia will carry via Havana, for \$50 either way, meals included.

The Mobile and New Orleans Steamers will issue excursion tickets for half fare.

The Memphis and St. Louis Packet Company will carry to Memphis or Vicksburg, by boat and balance by rail, for \$20 either way, meals included or \$17, and meals extra.

Dr. Hibberd's circular tells all else so far.

BIBLIOGRAPHICAL NOTICES.

Treatise on Disease of the Ear, including the Anatomy of the Organ. By ANTON VON TROLTSCHI, M. D., Professor in the University of Bavaria. Translated and edited by D. B. St. John Roosa, M. D., Clinical Professor of Diseases of Eye and Ear in the University of New York. Second American, from the fourth German edition. Pps. 565. 1869: Wm. Wood & Co., New York. Krull & Dickey, Canal st., New Orleans.

This is the second edition of the American translation, but is so much enlarged by the addition of cases of the translator, as to deserve more notice than is usually allotted to new additions. We do not know that we can better give an idea of the scope of the work and its value, than by quoting from the preface of the translator: "Although this volume is nominally a revised

edition of the former one, it is in fact a new work. It is translated from the fourth German edition to which the author has made large additions. The original has also been greatly improved by a thorough revision, and in many parts it has been entirely re-written. * * The science of Otology is fast taking its place in the van of the great movement in the rank of Medicine. Diseases of the ear are now receiving that attention which humanity has vainly demanded of our profession for centuries." It is scarcely necessary to call attention to the body of the work, as from his first work, Von Trottsc^h is well known to all who have made the ear a study. The author has very happily chosen the form of Academic lectures, thereby not only very materially increasing the interest of the subject, but also enabling the most important points to be better fixed in the mind by recapitulations. Of the three works now in print, (viz—Toynbee, Wilder and Von Trottsc^h,) we confess a partiality to the last. The translator has made many valuable additions to the original text. Taking everything into consideration we know of no work on Otology which we could more cheerfully recommend to the general physician or to the aurist.

Compendium of Percussion and Auscultation, and of the Physical Diagnosis of Diseases Affecting the Lungs and Heart. By Austin Flint, Sr., M. D. Fourth edition, New York: Wm. Wood & Co., 1869. New Orleans, Krull & Dickey.

A **Hand Book of Uterine Therapeutics, and of Diseases of Women.** By Edward John Tilt, M. D., Member Royal College of Physicians, etc. Second American edition, thoroughly revised and amended, pps. 337. D. Appleton & Co., New York : 1869. Krull & Dickey, New Orleans.

Pathological Anatomy of the Female Sexual Organs. By Julius M. Klob, M. D., Professor University of Vienna. Translated by Jos. Kammever, M. D., and B. F. Dawson, M. D., pages 299. New York, 1868: Wm. Wood & Co. New Orleans, James Gresham.

Practical Observations on the Etiology, Pathology, Diagnosis and Treatment of Anal Fissure. By Wm. Bodenhamer, A. M., M. D., etc., pages 199. New York, 1868: Wm. Wood & Co., 61 Walker street. New Orleans, Jas. Gresham.

Minutes of the Thirty-fifth Annual Session Tennessee Medical Society. Nashville, Tenn., 1868.

Venesection as one of the Means for the Arrest of Unavoidable Hæmorrhage. By C. C. F. Gray, M. D., Buffalo, New York.

The Part taken by Nature and Time in the Cure of Diseases. A dissertation for which a prize was awarded to James F.

Hibberd, M. D., by the Massachusetts Medical Society, 1868.
From the Author.

This little pamphlet arrives so nearly at the time of issue of the journal, as to prevent us from more than glancing rapidly over it. The author, however, seems to have chosen his points well, and argued upon them with much ability, but at the same time we cannot endorse the views to their full extent, nor does the Medical Society of Massachusetts seem to have done so, since we find the following endorsement on the pamphlet: "It is understood that the Society is not to be considered as approving the doctrines contained in this dissertation." The following is a summary of the author's views as presented in the end of the pamphlet:

1. All vitalized matter is the subject of a law of development peculiar to its class.
2. Vital organizations are not active *per se*, but are endowed with a capability of activity under stimulation.
3. Normal stimulants produce physiological activity or health; abnormal stimulants produce pathological activity or disease.
4. Human maladies are always the result of abnormal stimulants acting on the histological elements of the body.
5. Disease in any part continues as long as the pathological stimulant is operative; when this ceases the part returns to its physiological state.
6. To cure disease it is only necessary to remove the stimulant exciting it.
7. This stimulant is rarely known, and still more rarely can it be removed.
8. In most diseases we only recognize the grosser symptoms, after the initial processes have completed their course.
9. After the stage of recognition most diseases must pursue their course through a series of phenomena under an inexorable biological law.
10. The duty of the physician is to watch nature and assist her as opportunity may offer.
11. All perturbing medicines are themselves pathological stimulants, and should not be administered except under a certainty of abating a greater evil.
12. The present popular professional estimate of the medical virtues of drugs rests, mainly, on the vicious logic of *post hoc ergo propter hoc*.
13. That this estimate is erroneous, is proven by :
 - a. Curable diseases are recovered from in the absence of all kinds of drugs.
 - b. Curable diseases are recovered from under the most diverse treatment.
 - c. The adulteration of drugs makes their strength uncertain.
 - d. The state of the patient's mind makes the operation of even pure drugs uncertain.

14. A recognition of the doctrine of the *vis medicatrix naturæ* must underlie all rational therapeutics.

15. The principle involved in this phrase has been recognized and deferred to since the earliest historical era of medicine, and is likely to be immortal.

16. It derogates nothing from the physician, or the agents he uses, that nature is predominant, and art opiferous.

Pathological Phenomena Generalized. By H. Backus, pages 59.
From author.

First Annual Report of the New York Orthopædic Dispensary.
New York, 1869.

The Life of the Trichinia. By Rudolph Virchow, M. D., Ph. D., Professor University of Berlin. Translated by Rufus King Browne, M. D. From translator.

Operation of Vesico-Vaginal Fistula without the aid of Assistants, with a View of the Relative Merits of the Clamp, Interrupted Silver and Button Sutures. By Nathan Bozeman, M. D., New York, pages 26, 1869. From the author.

This little pamphlet contains the summary of remarks made by Dr. Bozeman before the New York Medical Journal Association, and introduces to the profession his supporting and confining apparatus. Want of space prevents us from saying more than that the apparatus supplies a want long felt by the profession, and fully accomplishes the principal objects had in view, viz:

“1st. Extension of the vertebral column and relaxation of the abdominal muscles essential to free gravitation forward of the pelvic and abdominal viscera.”

“2d. Support and mechanical confinement of the patient, by controlling muscular action at certain points, without encumbering the abdomen or interfering with the functions of respiration and circulation.”

“3d. The safe administration of anaesthetics.”

After describing his speculum, the balance of the work is devoted to a consideration of the value of the various kind of sutures. Every physician interested upon the subject of vesico-vaginal fistula should read the work.

We have received, through the kindness of Prof. Storer, a copy of the Constitution and By-Laws of the Gynaecological Society of Boston, together with an invitation to attend their first annual meeting in Boston, a courtesy for which we return our thanks, and regret our inability to accept. This is the first Society of the kind, so far as we are aware, which has been established in the United States. The officers elect for the present year are Winslow

Lewis, President; Horatio R. Storer, Secretary; George H. Bixby, Treasurer.

On the Identity of the White Corpuscles of the Blood with the Salivary, Pus and Mucous Corpuscles. By Joseph G. Richardson, M. D., formerly Resident Physician at the Pennsylvania Hospital.

After citing several microscopical examinations made upon the saliva, urine, pus and mucus, and their results, the author sums up as follows:

Tracing now the white blood corpuscle from its condition of irregular outline and amoebaform movement, as observed in serum and in heavy urine, when the circumambient fluid approaches the density of 1028, through its rounded form with slightly more distinct nuclei, in the liquor puris, and in urine of lower specific gravity, we find that immersed in a rarer liquid, approximating to the mean density of the saliva (1005), it has an accurately spherical outline, is more than twice the magnitude, and contains a number of minute actively moving molecules, thus exactly resembling in all sensible characters the true salivary corpuscle; and it therefore seems reasonably certain that the blood, under the appointed nervous influence, congesting the buccal mucous membrane and associated glands, moves slowly enough through their capillaries to allow some of its white globules to penetrate the walls of the vessels, as they are said to do those of the frog's mesentery in Cohnheim's experiment (Virchow, Archiv, Band 40, S. 38, n. s. w.), which, under the influence of the rarer saliva, expanding them and setting free to move their contained molecules, constitute the bodies so long known to histologists as the corpuscles of the salivary fluid.

Dr. Lionel Beale in his work on the "Microscope in Practical Medicine," remarks in reference to the examination of the saliva: "In the somewhat viscid matter of which the salivary corpuscle is composed, are multitudes of highly refracting particles in incessant motion. The nature of these particles is extremely doubtful. They look very like the germs of bacteria, and it is possible they may be of this nature."

If the hypothesis thus guardedly indorsed by the celebrated English microscopist be correct, it seems not improbable that the white corpuscles, either in the capillaries or lymphatic glands, collect during their amoebaform movements, those germs of bacteria, which my own experiments (American Journal of the Medical Sciences, July, 1868) indicated always exist in the blood to a greater or less amount. And further, it appears not impossible, that when thus loaded, their elimination through the saliva, under the mercurial influence, and their evacuation by a discharge of pus from a seton or a tartar emetic ulcer, really constitute that therapeutic value of these remedial measures in certain cases which has so long rested unexplained.

PERMANENT NOTICES.

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To Correspondents.

All Communications should be addressed to DR. W. S. MITCHELL, Proprietor, Lock Box 890, New Orleans, and should be legibly signed with the name in full, the Post Office, County and State. If on their business, and not on the Journal's, a postage stamp should be inclosed, to secure a reply. A favor will be conferred by adding to letters a list of physicians, with their Post Offices, in the county of the correspondent; also, any recent deaths or removals of physicians. Parties changing should state in full both old and new address.

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2.—No one will be considered a subscriber unless payment is made in advance, and the receipt of moneys sent will be acknowledged in the Journal only unless a stamp is enclosed for return of written receipt.

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To Contributors.

Original Articles forwarded for publication should be written on one side only of each page, should be forwarded two months in advance of the number it is intended for, and must not have been previously published in any other columns. Extra copies desired should be ordered with the contribution. Articles rejected are subject to the author's order, provided postage for their return is forwarded. No anonymous articles will be accepted, nor any matter exclusively personal, admitted, except as an advertisement.

To Advertisers.

1.—TERMS—One page, per annum, \$50; for one insertion.....	\$15.
One-half page, do 30; do do 	10.
One-quarter page do 20; do do 	5.

25 per cent. discount when more than one page is taken for a year.

2.—No advertisement received for less than one-quarter page; nor one, on any terms, which encourages charlatanism or tends to derogate from the honor and interest of the profession.

N. O. Journal of Medicine, will be furnished with St. Louis Med. Reporter one year for.....	\$8 00
" " " New York Medical Gazette, one year.....	6 00

Commutations as above must date from the commencement of each volume.

Receipt of all monies and letters not requiring especial reply will be acknowledged in the Journal.

To Agents.

Booksellers, Druggists, Postmasters, and other responsible persons, will be allowed to deduct a liberal per centage for all money collected, whether from the sale of copies of this Journal, from subscription fees, or from advertisements. On application, with satisfactory references, written authority will be given the applicant, to act as agent for this Journal. All agents must report promptly all payments, giving the name and address in full, the date and amount of the payment, and the date to which receipt was given; and should furnish lists of the physicians in their own and adjacent counties.

To Booksellers, Instrument Makers, Druggists, Etc.

Specimens of recent medical publications, instruments, drugs, etc., will receive such notice, as they may merit.

Subscribers can obtain, by forwarding to this office the proper amount, Medical works, etc., at publisher's prices, free of postage, also instruments at the lowest retail rates.

THE
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JOURNAL OF THE MEDICAL SCIENCES.

EDITED BY

DR. S. M. BEMISS & DR. W. S. MITCHELL,
S. S. HERRICK, M. D., and SAM'L LOGAN, M. D., *Co-Editors.*

Vol. XXII.]

JULY, 1869.

[No. III.

"*Tota philosophia frugifera et fructuosa, nec ulla pars ejus inculta
ac deserta sit.*"—CICERO.

NEW ORLEANS:

DR. W. S. MITCHELL, MANAGING EDITOR AND PROPRIETOR.

No. 1 CARONDELET STREET.

1869.

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THE
NEW ORLEANS
JOURNAL OF MEDICINE.

JULY, 1869.

ORIGINAL COMMUNICATIONS.



ART. I.—*Hæmorrhagic Malarial Fever* : By R. F. MICHEL, M. D., of Montgomery, Alabama. Read before the Medical Association of the State of Alabama, at its Annual Meeting in the City of Mobile, on the second day of March, 1869, and ordered by that body for publication in the New Orleans Journal of Medicine.

SYN. *Hæmorrhagic Malarial Fever* [Michel]. *Black Jaundice* [Ghent]. *Cachemia* [Osborn]. *Cachemia Hæmorrhagica* [Owens.] *Icteroide Pernicious Fever* [McDaniel]. *Malignant Congestive Fever* [Osborn]. *Purpuræmia* [Riggs]. *Yellow Remittent* [Sholl]. *Yellow Disease*. *Cane-brake Yellow Fever*. *New Disease*.

Definition.—A malignant malarial fever following repeated attacks of intermittent, characterized by intense nausea and vomiting, very rapid and complete jaundiced condition of surface as well as most of the internal organs of the body, an impacted gall-bladder and hæmorrhage from the kidneys. These phenomena present themselves in an almost uninterrupted link attended by remissions and exacerbations. It is a fever peculiar to the Southern part of the United States.

History.—We are told that this disease has been observed, occasionally in past years, occurring accidentally among other malarial fevers, but we find no such record up to the year 1867, and consequently must begin the history of the malady by inviting attention to a paper on “Nerve Force and Blood Changes,” by Dr. Francis Barnes, published in the March Number of the New Orleans Medical and Surgical Journal for 1867. When speaking of the influence of nerve force upon the blood producing changes in that fluid, he remarks: “In the interior of Louisiana, in the most malarial regions of it, as the Tensas swamp, there is a singular and very fatal affection, which has not received a name, and which I shall describe and let another give it one: The affection is an assemblage of symptoms—apparently the result of an impression on the nervous centres—and that impression a peculiar form of what occurs in a paroxysm of intermittent. It is always preceded by common chills, or paroxysms of intermittent, but finally the patient is seized with one during which the chilly sensation experienced is much more protracted, and the following phenomena present themselves: From the moment the chill is ushered in, bloody urine is discharged from the bladder, and if a blister is applied, bloody serum collects under the raised cuticle. A very small blood-letting causes syncope, and the blood appears broken down and dissolved. These are the most remarkable phenomena in connection with the subject we are now considering, and the rest of the symptoms appear to be disorders of sensation, nutrition and assimilation, which follow and result from this primary impression. The patient rapidly becomes jaundiced; he vomits and purges a great quantity of black, tarry-looking substance, which, when smeared on a sheet, leaves a green stain. If he live long enough, the blistered surface instead of discharging bloody serum will discharge green matter, which colors a poultice like green paint. The sufferings of the patient are terrible, as long as he retains his reason, and finally delirium, coma and convulsions close the scene.”

The next reference to this disease is found in a letter of Dr. H. C. Ghent, of Port Sullivan, Texas, to Prof. L. S. Joynes, of Richmond, Virginia, published in the April Number of the Richmond Medical Journal, for 1868. It is headed “Brief account of an

Epidemic of Jaundice." Prof. Joynes was induced to publish this letter in consequence of the following points of special interest therein stated: First, the *Epidemic prevalence* of the disease. This though not unprecedented in the history of jaundice, is rare. Secondly, the occurrence of jaundice without any evidence either of a *suppression* of the secreting action of the liver, or of an *obstruction* of the biliary passages; but on the contrary with the indications of an *excessive secretion*, the system being, so to speak, *deluged with bile*. Thirdly, the great fatality of a disease which is ordinarily so favorable in its prognosis. Lastly, the *apparently sanguineous* character of the urine.

Any one who has seen the disease under consideration, will be struck at once by the similarity, between the picture drawn by Dr. Ghent, in his letter, and the "*Yellow Disease*," which has prevailed for the last two years in the Southern part of the United States. Again. We would refer to two able papers on this disease published in the New Orleans Journal of Medicine. One for October 1868, by our distinguished writer Dr. T. C. Osborn, of Greensboro, Alabama, and the other by his son, Dr. James Doran Osborn, in the January Number of the same periodical for 1869. Both of these gentlemen have given a most graphic account of this disease. The former reporting *ten cases* so clearly as to give us a full appreciation of this malady which he has thought proper to call "*cachemia*."

Lastly, we would call attention to a description of "*haematuric or yellow remittent*" in the original department of the Medical and Surgical Reporter for October 24th, 1868, published in Philadelphia. This concise view of hæmorrhagic malarial fever is by Doctor Edward H. Sholl, of Gainsville, Alabama.

Cause.—Malaria is the exclusive cause of this affection, as it is in all others of this class of febrile disease.

Symptoms.—A severe chill, of the congestive type is the first symptom characterizing this formidable affection. The chill is recognized by extreme coldness of surface and great internal heat; the application of blankets is earnestly demanded by the sufferer, and a supplication for ice water accompanies the demand; cold without and heat within are the characteristic features of this protracted chill.

Fever follows with its usual concomitants : heated, red skin, parched mouth and extreme thirst, with eyes suffused, much restlessness and anxiety, with irregular sighing respiration, and the pulse quick and bounding. During the febrile illumination, the nausea and vomiting are extreme, and the severity of the two last mentioned symptoms is regarded by many as peculiar to this disease. The patient vomits dark grumous bile. After this nausea has continued for six, eight, or twelve hours, a jaundiced condition of skin and bloody urine become the leading symptoms, although these two characteristic features may accompany the chill. The suffused eyes now become *instantaneously* yellow, and the red skin changes its livery for the *bronzed-yellow*, which gives the name of "*yellow disease*" to this affection. Associated with this haematuria, we have violent pain in the small of the back, well defined in the region of the kidneys; however, no dysuria exists, although the continued desire to void urine is persistent. The tongue varies in appearance ; sometimes it is broad, indented at the margin and coated with a yellowish brown fur ; at other times it resembles a flabby oyster, and a pale milky color is the prominent feature ; this milky hue is soon tinged a straw color, which gradually deepens until a yellowish-brown coat covers the entire organ.

After a time the pulse becomes less frequent, more quiet, and whether there be a remission or intermission in the febrile paroxysm, there is a decided abatement of all the symptoms enumerated above, with the exception of the nausea and vomiting, which continue to annoy the patient, until another marked paroxysm recurs, when we have a repetition of what has been already described.

During the remission, it is not an unfrequent occurrence that, the skin becomes clearer and less yellow ; and the urine returns to its clear limpid character, only however to reassume its bloody appearance upon the invasion of the chill,—when the dark-bronzed color of the skin becomes permanent we will sometimes find the face, chest, and abdomen studded either with purpura haemorrhagica or vibices ; and should a blister be applied at the time, the elevated cuticle will be filled with a bloody serum.

The bowels are more frequently constipated, sometimes, how

ever we have copious dejections of dark, tarry, feculent matter, and at other times, the operations are almost consistent, but of a dark color.

Symptoms in detail.—Some of the symptoms of this disease require more than the transient allusion made of them in the above description ; and to those we would invite attention.

The most prominent symptoms are the “*yellow color*” and the “*hæmaturia*.”

This yellow color tinging not only the skin, but many of the internal organs of the body is not as a general rule gradually developed, as we are wont to see in jaundice and other hepatic affections ; but it is prompt, and as Doctor J. D. Osborn remarks, developed in “*the twinkling of an eye*” Is this yellowness due to an obstruction in the gall passage ? Have we an evidence of gall-stone or of some foreign substance engaged within these important channels ? Not at all ; no want of bile, for we find it freely secreted, lodged in almost every tissue except the brain ; and as Doctor Joynes has justly remarked “*deluging the body*.” Is the yellowness like the color of jaundice or yellow fever ? Or is it peculiar to this disease ? We all know how difficult it is to describe a color ; but believe me when I say that, I think I could in every instance readily distinguish the livery of this affection from the *golden yellow* of *yellow fever*, or the *saffron yellow* of *jaundice*. The yellow of this disease is mingled with green, or in other words is of a bronzed character, and is justly described as a “*bronzed-yellow*.” Again ; this color, no matter how deep it has invaded the tissues, is capable of rapid absorption—yes—just as rapid as its development, and we return in a few hours to find our patient to our utter astonishment assuming his natural color, only to become again bronzed upon the recurrence of a chill. If the patient recover, the disappearance of the yellow color of the skin is very gradual, so much so that for weeks we can readily recognize any convalescent from this disease.

The next characteristic feature of importance is the *hæmaturia*, and we find this condition existing in every case. The urine is discharged in large quantity and without pain, but mixed with blood ; in fact, the discharge consists of more blood than urine—and as we shall see hereafter when we speak of the post-mortem

revelations, the blood appears to be *comparatively* healthy. One remarkable fact in this connection is, that unlike other haemorrhages from the kidneys, a cessation is no guarantee for its non-recurrence; for though the urine may become perfectly clear and limpid during a remission, if we are not successful in averting the recurring chill, this excretion will quickly, nay, almost instantaneously give evidence of its bloody tendency.

Very frequently our patient dies, not having passed a drop of bloody urine, for twenty-four or forty-eight hours previous to his death, and the urine obtained from the bladder at the post-mortem is perfectly healthy. We think this last symptom and the peculiarities attending its manifestations, perfectly characteristic of this, and *only* this disease. We know of no malarial fever behaving in this way, and hence we have termed the disease *haemorrhagic malarial fever*.

The haemorrhagic tendency of the disease is demonstrated occasionally from other surfaces besides the urinary organs. Doctor Osborn, in his paper already alluded to, mentions in Case 1st, "slight oozing of blood from the gums and fauces." "Doctor Weatherly, of Montgomery, speaks of severe and protracted haemorrhage from the nose." We have all witnessed the bloody serum which exudes from the blistered surface; not like the haemorrhage from the denuded surface of a yellow fever patient, which is truly alarming in its results, from the fact that it is almost uncontrollable, but in this disease this haemorrhage is easily suppressed and readily recognized by the blood being freely mixed with bile, making a bloody, green mass, almost pasty in character, as Dr. Barnes has very accurately described. Doctor Weatherly refers to this exudation as of a dark-brown color.

Only two forms of eruption have been noticed in this disease, purpura haemorrhagica and vibices. This induces us to admit its low character, and has caused Dr. J. M. Owens, of Hamburg, Arkansas, to speak of the disease as "*cachexia haemorrhagica*."

The nausea and vomiting is remarkably severe and persistent. It begins with the chill, and ends when the patient has succumbed to the fell destroyer, or has passed far into convalescence. I remember a patient of mine who complained of the nausea for at least three weeks after he was enabled to move about the

house. In almost all forms of fever we have nausea and vomiting, but as a general rule these symptoms are entirely controlled, or at least partially manageable and materially lessened by the administration of internal remedies and external applications. Now those who have treated many of these cases of hæmorrhagic malarial fever, are fully aware how little these two symptoms appears to be influenced by any mode of treatment.

The matters ejected from the stomach have been carefully examined not only chemically, but by the aid of the microscope; and no matter what shade of color they present, whether they be as Dr. Barnes has described, of "a black, tarry character," or as Dr. Ghent has recorded, "of a red, sometimes green; and in one case, blue color," or as Dr. T. C. Osborn has mentioned one of his patients "vomiting a greenish fluid and having a greenish expectoration," or as Dr. Weatherly says of Mr. E. on the fifth day, eructating and expectorating, the greenest-looking stuff he ever saw"; it is nothing more than *bile with the muriatic acid of the stomach.*

Here we see no dark granular substance with coffee-grounds sediment, no terrible acid accumulation turning litmus paper promptly red, although some traces of muriatic acid are present. No amorphous granules swimming through the liquid, no dense, opaque mass tinged darkly with hematin, no shreds or beds of mucus containing epithelial scales, granules and broken down blood disks; no inspissated viscid form of mucus characterizing what Dr. Middleton Michel has so forcibly portrayed as the marked feature of the "black vomit" of yellow fever. No; we find biliverdin, cholesterol, and all the elements of bile, and by the addition of an acid we may readily convert these ejecta into almost every color of the rainbow, green, blue, red, violet or brown. No; we have no blood here, no trace of a hæmorrhage from the stomach; and I would like to disabuse the public mind from any supposition which would create the belief that the vomit in this disease resembles the black vomit of yellow fever in the remotest possible manner. *The patient vomits dark, grumous bile.*

With regard to the tongue, I have already given my opinion of its appearance, but I might add that Dr. Osborn [for whose

opinion I have the highest respect], speaks of it as peculiar to malarial affections. In case 1st. he refers to the tongue as bluish, thick, coated over the middle with a dirty fur, leaving clean margins and deeply crimped edges,—and he holds himself responsible for such a tongue, not only in malarial fevers generally, but particularly in the haemorrhagic form of malarial fever now under consideration. He regards this tongue as plainly calling for the administration of quinine.

The condition of the brain in this disease is very variable. As a general rule the mind is quiet and clear up to the period of death. Dr. Ghent remarks when referring to this subject: "The intellect is usually unclouded, except in the most violent cases, or in those about to prove fatal. In such cases the patient becomes drowsy and finally passes into a state of coma from which he never recovers." On the other hand, we find Dr. T. C. Osborn speaking of some of his patients with "uncontrollable dejection of spirits," and in his own case he says: "I had no inclination for mental or physical exertion, and my mind was disturbed by dreams." Again—in case 6th, he says, his patient had "intolerable pain in the head with a disposition to stupor and delirium," and in case 4th we see "partial stupor, and when the patient was aroused from this stupor he utters delirious sentences."

The entire nervous system is excited, as evinced by the patient's great jactation and anxious expression of face. Other nervous phenomena are often present. I saw a case in consultation with Dr. Weatherley, in which hiccup was a very prominent symptom; in fact the Dr. tells me his patient hiccuped from the third day of his sickness to the day of his death, a period of twelve days; and this painful symptom continued during sleep as well as in the wakeful moments of the patient, even when under the influence of large doses of chloroform.

I have already alluded to the condition of the bowels, and only now refer to the matter by way of recapitulation. Most frequently we find great torpidity of the alimentary canal. The bowels are costive, but sometimes we find them open and even active. Dr. Barnes in alluding to this matter says "the patient purges a great quantity of black, tarry looking substance, which when smeared on a sheet leaves a green stain." I have always found

the bowels hard to move, and only responding to large mercurial doses; but at the same time when natural evacuations did occur, I have never seen the gray-colored stool so characteristic of jaundice, as if the natural stimulus to the bowel was wanting.

The temperature of the body as a general rule does not vary much. Dr. T. C. Osborn, in case 4th, says: "The skin was not above a natural temperature." Dr. Weatherly in his case of M. E—l, found the temperature on the morning of the 3d day at eight o'clock 96° in axilla, and at eight o'clock on the evening of the same 103°; on the 4th day at eight o'clock A. M., temperature 96°; and at one o'clock, P. M., as well as at eight o'clock P. M., 96°. On the 5th and 6th day the thermometer made the same record as on the preceding day, although the skin was very cool, could almost be called cold. On the morning of the 7th day at eight o'clock, this valuable instrument registered 94°, and never varied from that time until the sufferer breathed his last. Doctor Sholl says: "We have a temperature varying from 98° to 105°, the last the highest I have ever found it, falling rapidly 4° to 5°, the skin sometimes cool."

I think, as a general rule, females are more subject to this disease than males, and like the yellow fever of our country, negroes are less liable than whites, in fact, they must *almost* be regarded as exempt. All ages, all temperaments, are alike subject; Although Dr. Sholl thinks it occurs more frequently in adults than in children. We are aware that some individuals are not susceptible to malarial impressions. I, for example, have never had a chill, although I have lived all of my life in a malarial country; such persons should be considered exempt.

We find all forms of intermittent fever, quotidian, tertian and quartan, as well as remittent fever, terminating in this disease; and according to Doctor Ghent, one attack pre-disposes to another. Dr. Sholl says: "I have seen two attacks in the same individual, *at an interval of ten weeks*, the second by far the most severe, terminating, however, in recovery."

This disease is epidemic in certain localities, particular in the prarie country of Alabama, occurring in the fall or early winter, though we hear of cases in almost every month of the year.

Duration.—The duration of this disease has been variously re-

ported, but from what we have seen and read concerning it, we should say that, in from four to twelve days it will run its course. Dr. Ghent has reported one case which terminated fatally within twelve hours ; this however must be considered of rare occurrence.

Diagnosis.—*It is diagnosticated readily from bilious remittent and intermittent fevers,* by bleeding from the kidneys and the uncontrollable and unceasing nausea and vomiting.

From yellow fever.—By not being continued in type. By not attacking those who are subject to that disease ; and by appearing in localities almost unknown to that milder affection. By the urine being not only bloody but full of bile, and by the yellow color of the skin being produced by the deposition of *bile* instead of *blood* under the skin ; and lastly—by the absence of microscopical black vomit and many other features easily recognizable as characteristic of yellow fever.

From hepatic affections, and especially jaundice.—By the severe initial congestive chill, and the sudden change of color in the skin which is *bronzed* instead of *saffron yellow*,—and—by its remarkable fatality, which is unknown in jaundice, as well as the hæmaturic feature which is *conspicuous and intermittent*.

Prognosis.—The prognosis is very unfavorable. I regard hæmorrhagic malarial fever as the most fatal of all the diseases which have come under my notice, and from what I can glean from others I am strengthened in this opinion.

I have lost one half of my cases. Dr. T. C. Osborn reports ten cases, of which five died and five recovered ; the Doctor terms it a malignant disease, and says in one of his valuable papers, “simultaneously with its appearance in this vicinity, it was announced also in Tuscaloosa, Eutaw, Selma, and Montgomery, and the rumors that reached us, represented the percentage of mortality *equally as great as ours*, in each of these places.” Dr. Barnes speaks of it “*as a very fatal affection*.” Dr. Ghent in his letter remarks, “I confess the disorder is new to me, and is not only on this account interesting, but also because *of its fatality*. In some districts the mortality has been as high as thirty-three and one third per cent. of the cases, and in one neighborhood I learn is still higher.”

Doctor Sholl says: “*This is eminently a grave disease. Of twelve cases I have seen in consultation and my own practice, six, or fifty per cent. have been fatal;* the first three recovered, the next six died; one of the fatal cases was complicated with abortion; two of these deaths occurred in January of this year (1868). Since then I have seen three cases, one in April, one in August, one in September. These all terminated favorably. The percentage of mortality during the present year, in neighborhoods where it is prevailing, is far less than last year, tested in the same manner by the same physicians.

Dr. T. C. Osborn regards cold weather as advantageous for the favorable termination of the disease.

Modes of Death.—The most common mode of death in hæmorrhagic malarial fever, is by a gradual exhaustion and wearing out of the powers of life; most of the cases on record terminated in this way. But sometimes you will observe uremic poisoning, and in these cases the mode of death is either by profound stupor on the one hand, or uremic intoxication with delirium, coma and convulsions on the other. I lost a patient (Mr. Wm. Ware) upon one occasion solely by the bleeding from the kidneys which I could not control, and I know of another in which the hæmorrhage from the Schneiderian membrane continued until death closed the scene.

Pathology.—Owing to the kindness of my friend Dr. J. S. Weatherly, of Montgomery, I was permitted to make a post-mortem examination of the body of one of his patients, Mr. E., who died of hæmorrhagic malarial fever, on the 6th of December, 1868, and I now furnish the result of this examination as a contribution to the pathology of the disease.

The rigor-mortis was peculiarly great, so much so, that the body could be lifted easily by the occiput and heel. The discoloration was complete and extensive. The skin everywhere, as well as the cellular tissue, was of a yellow color. The muscles were *very red*, not as we usually see them, of a reddish color, but as if smeared with blood, and the blood permitted to dry upon them, as we are wont to prepare them for anatomical demonstration.

Upon removing the scalp, the pericranium was of the charac-

teristic hue, and on opening the calvarium we observed that the dura-mater was yellow and the brain perfectly natural, somewhat firmer than we generally meet with it however; very little vascularity was observed, the veins were almost entirely empty; in fact we encountered no blood, except in the tœcular Herophili, which seemed to retain all that was in the cranium. The brain was of its usual size and weight, a little more than three pounds avoirdupois, and the nerves emanating from it in their normal condition.

Upon opening the chest, we found the yellow color pervading every tissue, even the pericardium and the fatty zone around the base of the heart, which was perfectly healthy. The usual quantity of serum in the pericardium was of a deep-bronzed color. Lungs perfectly normal, no adhesions between the pleura-pulmonalis and the pleuro-costalis.

The abdominal cavity was next carefully examined, and we found the organs contained within the cavity in the following condition: Omentum perfectly normal but of the yellow color, especially the fat encased within its folds, which seemed of almost a saffron hue. Stomach filled with dark-grumous bile; mucous membrane thickened and vascular, especially in the vicinity of the pylorus. The intestines normal, and the pancreas its usual length, about six inches, and brightly yellow, especially its angular lobules.

The spleen, (naturally five inches in length, four inches in breadth, one and a half inches in thickness, and weighing seven ounces) was almost *three times its normal size*, and instead of being friable, as we usually find it, it was of a firm and solid consistency, occupying not only its usual resting place, but encroaching upon the lumbar region, and taking up about half this space. *The weight of the spleen was nineteen and a half ounces.*

The kidneys were much larger than usual. The normal weight of a healthy kidney being four and a half to six ounces, while this kidney weighed *ten and a half ounces*, which is almost double the normal weight. The kidneys presented an appearance which was *most peculiar*. The dense fibro-areolar tissue surrounding the kidney could be easily peeled off, leaving the organ smooth and of a pale-reddish color, demonstrating the fact that, the

organ had passed through no severe inflammatory action. A transverse section revealed the cortical and medullary substance of a dark-green color. *This organ appeared to have been well soaked in alcohol, until it had become hardened, and then painted a bottle-green color.* The supra renal capsules were of their usual yellow color, and these appendages to the kidneys were perfectly normal.

Sometime before this, we were enabled through the kindness of Drs. Douglass and Seelye, of Montgomery, to examine the kidney of Dr. Dillard, who died of haemorrhagic malarial fever, and in this instance, although we saw no evidence of change in the organ, it had appeared to these gentlemen, upon removing the kidney from the body, that it had been somewhat congested. It was reddish, but normal in size and weight.

The liver (of Dr. Weatherly's patient) was somewhat larger than usual, and weighed four pounds and three-quarters of an ounce or sixty-four ounces. It was firm and solid and of a dark claret color, probably dark chocolate color would illustrate more perfectly what I intend to convey.

The gall-bladder protruded beyond the anterior or upper border of the liver, and upon careful examination revealed a condition to which I invite your earnest attention. It was a conical or pear-shaped mass almost solid, could be lifted up easily out of its socket, and upon being cut into revealed a very thick granular biliary mass perfectly impacted and pasty, of a very dark-green color, resembling meconium, the smallest particle of which would tinge a basin of water the color of saffron.

Our attention was immediately directed to this *pasty mass*, and upon making a clinical and microscopical examination it proved to be bile. There was in this as in another similar case, examined sometime back, *no blood* to be detected in the mass, under the field of the microscope. Biliverdine, cholesterine and the biliary salts (in fact the true elements of bile) were present. Although thirteen years of my life have been spent in anatomical investigations, I never found the gall-bladder in such a condition—hard and containing so consistent a mass.

The bladder was distended with urine, which was of a clear color and ammoniacal odor.

We could observe no pathological change in the sympathetic nerve or the nerves emanating from the spinal cord.

The blood under the field of the microscope presented *almost* its usual appearance; some of the blood-corpuscles were rather attenuated but not broken down. A decided increase in the white corpuscles was recognized; in addition to the haematin we thought we detected biliverdine coloring the fluid. So much for the blood found in the vessels.

The bloody discharge from the bladder was repeatedly examined by the microscope and found to be excess of blood and urine, with the addition of the coloring matter of bile, which was well marked in almost every specimen.

Sometimes so much blood was discharged that it would clot at the bottom of the vase, and of course in such cases nothing but blood is recognizable under the microscope. Here and there some crystals of urea were observed, and when the liquid was permitted to rest, some slight deposits of the phosphates colored by the urosacine, could be readily detected. The specific gravity of the liquid was 1011 to 1020; it was decidedly acid; and it was not uncommon to find the urine albuminous.

The blood in the vessels and the blood in the urine have not under the microscope the remotest resemblance to that fluid as presented in a yellow fever patient, and for proof of this fact we refer you to the researches of Dr. Middleton Michel, on this subject, published in the Charleston Medical Journal, May, 1853, and Dr. Hassall, of London, in the Lancet, for February of the same year. To these gentlemen we are indebted for a proper microscopical examination of the blood in yellow fever.

I may state here that these liquids were examined in a perfectly fresh condition, no time was allowed for the putrefactive process to begin.

It is proper here to allude to the microscopical examination of the urine made by Dr. T. C. Osborn in his cases, and in addition we will take the liberty of adding the chemical examination of the same fluid made by Prof. N. F. Lupton at the solicitation of the same gentleman.

"In quantity the secretion rarely varied from a healthy standard, but all its other features were continually changing.

At one time it would be a true hæmaturia with albuminous deposit, at another amber-colored and full of dumb-bell crystals beautifully distinct, and again limpid, with a splendid iridescent pellicle floating upon the surface. When it was hæmaturic, *blood dises* and tube casts were more or less abundant in the field of the microscope and albumen and clots would fall to the bottom of the vessel. I mention these particulars because several intelligent physicians have expressed doubts as to the bloody character of the secretion. Only once did the urine fail to reddens litmus paper, and that was during the prevalence of the triple phosphates; it was then slightly alkaline. The specific gravity varied in the different specimens from 1010 to 1030; being highest in the hæmaturic, and lowest in the phosphatic. Sometimes the changes would follow each other in rapid succession during the day."

Two Liquids submitted by DR. JAMES D. OSBORN for Examination :

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| 1.—Dark or brownish-red liquid. | 1.—Light or cherry-red liquid. |
| 2.—Ash-colored precip. at bottom of bottle. | 2.—No precip. at bottom of bottle. |
| 3.—Offensive smell of putrid urine. | 3.—Offensive smell of putrid urine. |
| 4.—Blood corpuscles detected by microscope. | 4.—No blood corpuscles detected. |
| 5.—Strongly alkaline, (ammonia evolved). | 5.—Strongly alkaline (ammonia evolved). |
| 6.—Hydrochloric acid caused evolution of carbonic acid, showing presence of carbonates. | 6.—Hydrochloric acid caused evolution of carbonic acid, showing presence of carbonates. |
| 7.—Heat caused coagulation, the liquid assuming a muddy brown color, showing albuminoid sub. | 7.—Do |
| 8.—Nitric acid caused coagulation. | 8.—Do. |
| 9.—Hydrochloric acid solution and chloride barium, white precip. showing presence of sulphates. | 9.—Do. |
| 10.—Nitric acid solution and nitrate of silver, white precipit, showing presence of chlorides. | 10.—Do. |
| 11.—Acetic acid and ferrocyan. of potas., precip., showing albuminoid sub. | 11.—Do. |

12.—Acetic acid solution on addition of 12.—Do.

potas., and boiled does not co-agulate, showing fibrin perhaps.

The liquids are a mixture of blood and urine.

N. F. LUPTON,

Prof. Chemistry, University South.

Doctor Edward H. Sholl in his valuable paper already alluded to, remarks under the head of *anatomical characters*, that upon making a post-mortem examination of a man aged forty years, twenty-four hours after death by haemorrhagic malarial fever, the following condition of the body was apparent.

" Cadaver unusually rigid, emaciation slight, patient having been sick but four days. *Liver* less firm than usual, slightly enlarged, much engorged with blood; bile in unusual quantity. *Gall-bladder* containing a small quantity of thin dark-green bilious matter, its inner coat slightly softened. Kidney; *right*, small and *firmer* than normal; *left*, one-third larger than normal in size, its tissues much softened and easily broken down. *Spleen* enlarged one-half, softened, its mass giving away readily under pressure of the finger, deeply engorged with a dark grumous blood. *Intestines* and *bladder* presented no lesion. Blood almost entirely deprived of fibrin. The *urine* tested by heat and nitric acid, was very heavily charged with albumen. In response to various tests, employing f. $\frac{3}{5}$ ss of urine, one-half to two-thirds of its bulk became firmly coagulated. Under the microscope the *urine* presented ragged, disintegrated and broken-down blood-corpuscles. In a recent post-mortem made by Dr. Pearson, of this county, the same characteristics presented themselves; the subject having been a regular drinker, the *liver* was found very much enlarged, its upper half being nothing but a pultaceous mass."

From the symptoms of haemorrhagic malarial fever which we have detailed, and from the careful post-mortem examinations made of persons dying of this terrible malady, what have we to say of its pathology?

Both Drs. Barnes and T. C. Osborn take this position with regard to the pathology of this disease. A malarial poison acting upon the blood renders that fluid unfit for the nourishment of the body, and even poisonous to the nervous system, but particularly to the abdominal sympathetic; and hence all the phenomena

to be observed in the disease. Dr. Ghent, on the other hand, records his pathological opinion clearly and distinctly in his letter to Dr. Joynes, from which I now quote: "As to the pathology of this disease, some contend that its seat is in the kidneys, that it is due to a congestion of these organs. Others maintain that the mischief has its origin in the liver, and the kidneys are effected secondarily; that the kidneys, in their heroic effort to cast out the biliary matter from the system, become congested, and hence the hæmorrhage. This is my opinion, so far as I have been able to observe and speculate."

It gives me pleasure to copy from a private letter from my talented young friend Doctor B. H. Riggs, of Selma, Alabama, his views of the pathology of what he terms "*Purpuræmia*." It is entirely theoretical, for the Doctor has not as yet examined the urine in this disease microscopically or chemically. He has determined to do so however this summer, and I trust he will furnish the public with his valuable researches."

"My theory of the pathology of purpuræmia is this; that one of the functions of the spleen is the disintegration of red blood corpuscles, as advanced by Kolleker, in 1848; that the liver takes up the debris of this destructive action from the splenic vein, and uses them in perfecting white corpuscles just from the ductus lymphaticus, and in the formation of bile; if these effete matters are allowed to accumulate in the blood current by being too rapidly generated (as in a turgid spleen), or too slowly eliminated (as in a torpid liver), they, by retrograde metamorphosis, form noxious compounds, as purpurine of Golding Bird, or uro-erythin of J. Franz Simon (which are synonymous terms), and by their presence produce all the phenomena of what has been termed "*Hæmorrhagic Malarial Fever*." The functions of the spleen and liver, as of all other organs, are performed through the agency of healthy capillary vessels; now the prime cause of the disease is the stupifying effect, if I may use the term, of the malarial poison upon the sympathetic nerve, the chief function of which is the supply of stimulus to these vessels, and without which they become relaxed and congested; and thus these great sewers of the body, the kidneys, endeavor to eliminate these

bodies from the blood current ; the *bloody-looking* fluid discharged from the kidneys, in many cases, contain no blood, but is colored with purpurine ; when blood corpuscles exist in the urine, it is as the result of the high grade of irritation of the kidneys, caused by the morbid matters strained through them, and the consequent congestion and rupture of the delicate vessels of the Malpighian tufts."

There can be no doubt that after malarial poison has saturated the body, and been held for some time in a latent condition, the nervous system and especially the cerebro-spinal, becomes suddenly and seriously deranged. The result of that impression produces a chill. During this period that part of the abdominal sympathetic known as the solar plexus becomes functionally diseased ; and we find the liver, spleen, and kidneys, more or less disturbed, as is indicated by the violent pain in the right hypochondriac region and in the small of the back. Now when the liver has done its work to the best of its ability and is thus suddenly and energetically overstimulated by an extra dose of malaria which poisons the solar plexus, it becomes as it were paralyzed, and the elements of the bile, biliverdine and cholesterine which exist already formed in the blood (and in these cases in my opinion in very large quantity) are retained until that vital fluid becomes saturated with these elements which the liver should abstract. With the blood in such a condition, charged with the elements of bile, particularly its coloring matter, need we be surprised that the kidney, the only organ left to do the work, should throw out blood laden with bile, which blood has already tinged every tissue of the body ?

If we catch the kidney in the act of bleeding, we will find it bloody and looking as if congested ; and on the other hand, if the urine after being hæmaturic, return to its clear and limpid character some time before death ; we must not be surprised to find a deposit of the coloring matter of bile in those organs, imparting to them that peculiar color which we have already described. Again : What would be the condition of a piece of animal tissue submerged for any length of time in bile ? It is well known that the tissue becomes hardened, peculiarly so, and this is the appearance of all the tissues of the body which I have examined in persons dying of hæmorrhagic malarial fever.

Finally, let us glance at the modes of death. First, by exhaustion from loss of blood; we can easily appreciate the termination when we see the pabulum of life absolutely running out through the urinary organs. Secondly, when the kidney following the example of its exhausted compeer, the liver, ceases to act, and the elements of the urine retained in the blood poison the brain and spinal cord, and our patient dies from uremic intoxication with all its painful sequences, stupor, delirium, coma and convulsions.

Treatment.—It is necessary for us to consider solemnly and carefully what course of treatment, has been, or might be beneficial for the relief of a disease which we have described as of malignant character, and whose prognosis we have regarded as positively unfavorable.

I fear as yet we have little of consequence to say upon this matter; but of one fact we are certain—that all who have written, thought of, or treated this formidable affection agree, in one particular, no matter how their opinions may differ in other respects with regard to the treatment of this disease. We must rely for success upon the administration of calomel and quinine. The former is used for its peculiar impression upon the liver and portal circulation in addition to its purgative quality, and the latter not only for its tonic, but mainly for its anti-periodic property.

First of all therefore, we administer twenty grains of calomel, and in six or eight hours a dose of oil; so soon as successful purgation has been secured and bile appears to flow rapidly through the primæ viæ, we begin with the sulphate of quinine and capsicum, twenty-one grains of the former and three grains of the latter divided into seven pills; one every hour until all are taken; being careful to secure the administration of the entire amount at least two hours before the expected pareoxysm.

I am aware that some persons object to the administration of large doses of calomel, and prefer giving it in smaller quantity, and in combination with opium; taking for example twenty grains of calomel and two grains of opium, and dividing this into four powders; giving one powder every two or three hours until all are taken. I prefer the former mode of administering this article, because, being anxious promptly to begin the use of the

quinine, I do not like to take the chances of the accidental passage through the bowels of this important remedy. I prefer waiting until the mercurial purge has finished its work, before proceeding to ward off the next febrile paroxysm. Again : I prefer the impression of a large mercurial dose upon the exhalents of the intestines, and believe much is to be gained in the treatment by this impression.

Should, however, the chill with all its serious consequences recur, notwithstanding the amount of quinine already taken, we return with confidence to the same remedy ; but suggest its administration at the end of the febrile paroxysm, in other words before the period of remission or intermission has fairly began ; the quinine at this time should be given in three grain doses every two hours until twelve or eighteen hours are consumed in its administration or until the patient is thoroughly quininized.

While the skin is cold, we apply warm bricks to the feet and even around the body, and at the same time the use of warm drinks as pepper or sage-tea to promote the action of the skin, is desirable. Doctor T. C. Osborn speaks very highly of the warm bath in this connection, and suggests the addition of one gallon of lye-water each time to the bath. He used it upon himself, and speaks of it as follows : "The warm bath at night constituted my greatest comfort, and after remaining in it for one or two hours my feelings would be delightful ; sleep coming without an effort, whilst the skin continued soft and perspirable during all next day."

When the quinine cannot be digested, and when it becomes, as it always does, absolutely necessary to bring the patient under its influence, we would recommend its hypodermic application. Its beneficial effects are very readily produced in this way. In the case referred to as post-mortamized, I saw Dr. Weatherly use large quantities of the sulphate of quinine hypodermically, at least sixty grains during a very short interval ; in five grain doses.

For the purpose of relieving the bloody discharge from the bladder, various remedies have been suggested ; particularly the elements of astringency, tannin and gallic acid. The acetate of lead and opium pill meets with some approbation. Doctor T. C.

Osborn tried tinct. of krameria and the mineral acids. In fact after giving a fair trial to mineral and vegetable astringents, he speaks of them unfavorably in his last paper. He says: "In one case in which I had not used astringents freely, and in the others I noticed a marked suppression of urine after the subsidence of the hæmorrhage; in my next case, after mature reflection, I determined to deviate from my former treatment, and reject astringents entirely, and let the hæmorrhage alone, for I had arrived at the conclusion that there was a morbid condition of the kidneys which tended to suppression, and by this suppression morbid matters were retained in the blood, which would prove to be of great danger to the nervous centres; and now, in conjunction with remedies directed to the abdominal organs, I determined to direct a class of remedies to the renal organs which would break up that condition, and accordingly selected diuretics which, in my opinion, would relieve the system of the dreadful poisoning by urca." I need not say that I endorse every word the Doctor says in this relation, and will now proceed to detail what I have found of benefit in this particular.

Spirits of nitre in half-ounce doses every three hours; pulverized nitrate of potash, grains three, in a gill of water-melon seed tea, or in Buchu tea, or even the fluid extract of Buchu three or four times a day; also the acetate of potash. And in conclusion, Dr. T. C. Osborn says: "If an alkaline remedy should become necessary, I would in future select it from one of the preparations of ammonia or petash; having seen the prompt return of hæmaturia under eight grains of bicarbonate of soda, for the relief of urticaria during convalescence." This last is not in accordance with the recommendation and experience of Dr. McOliver, of Montgomery, who uses the hyposulphite of soda in large doses to control the hæmorrhage from the kidneys, and at the same time states that he has the utmost confidence in its administration. Dr. C. F. Fahs, of Selma, regards the hyposulphite of soda as the sheet-anchor in this disease. In Florida, where this malady has just taken root (November, 1868), the physicians in addition, to the mercurial treatment, rely principally upon wood-ashes to control the bleeding. Drs. Smith and Edwards, of Prattville, Alabama, have mentioned to me their success in controlling the

haemorrhage from the bladder, by administering large doses of lime-juice—say one ounce every hour or two until the bleeding ceases. In one of my cases, Mr. A., I was induced to try this remedy and was delighted with its successful operation, the haemorrhage appeared to be completely controlled by it. I have had no case since this experiment was resorted to, but will give it a fair trial at the next opportunity.

Another important symptom claiming our attention, is the nausea and vomiting already described, and though loathe to admit, we are compelled to state that it baffled all our attempts at treatment. The administration of one-quarter of a grain of sulphate of morphine by the stomach, rectum, or hypodermically, has been used without effect, and even the application of a blister to the epigastrium seems not to produce the desired effect. I think upon one occasion, the mustard poultice, as recommended by Dr. Baldwin, did prove serviceable; and it may not be irrelevant to mention his mode of preparing this important external application.

"Boil a quart of meal to a tolerably consistent mush, and spread it within a folded towel. The mustard, which should be prepared in the mean time by mixing one portion of mustard with five or six of meal, and made into a batter by the addition of hot water, is then poured over the mush, and the whole covered by a thin piece of sheeting.

The mustard applied in this way is rendered much more active, and will redden the skin when diluted in this way to one-sixth of its strength, almost as soon as cataplasms of unmixed mustard, and much quicker when applied to cool or cold extremities. Consequently, if applied without being blended with some farinaceous substance, it would be very likely to produce vesication." (*The Western Journal of Medicine and Surgery*, for January, 1845.)

In addition to these remedies for the relief of the nausea and vomiting, we have used powdered ice, ice, soda water with a little wine to prolong effervescence—iced sangaree, hoc and soda water, iced lemonade, magnesia or lime water and milk with a little tincture of ginger, but without effect. Doctor T. C. Osborn says: "For the nausea and vomiting soda water in effervescence

promises more than any other remedy." Doctor Weatherly used without any advantage, the oxalate of cereum, two grains every two hours until six doses were taken. In the case of hiccup, which I have already alluded to, the Doctor used besides the morphine hypodermically the thirty-second part of a grain of atropia, as well as large quantities of chloroform, and still the hiccup and the nausea and vomiting continued unchanged. Small doses of calomel and opium, five grains of the former and one grain of the latter mixed and divided into two or three pills, one every four hours, is spoken of, as of much utility in controlling or at least mitigating this unceasing nausea and vomiting. { With reference to the use of the *blister* and the administration of *narcotics*, especially opium and its preparations, there is much dissidence of opinion.

I can see no advantage to be derived from the application of a blister; it never controls the nausea and vomiting in this disease, and if it produces strangury, it must be decidedly hurtful, for the kidney and the urine play no insignificant part in the history of this formidable affection. I think any risk of uremic intoxication should be strenuously avoided. I therefore condemn in *toto* the use of this agent. Doctor T. C. Osborn says: "Blisters are perhaps harmless, but do not deserve special confidence." Doctor Sholl in alluding to this matter says: "At the outset apply a large blister, four by six inches, to the lumbar region, immediately over the tender portion of the spine, and one six by ten, over the region of the liver, stomach and bowels." Doctor McDaniel, of Wilcox County, Alabama, unequivocally condemns them; and this I think is the received opinion.

With regard to the use of narcotics, various opinions have been expressed. For the jactation, restlessness, hiccup and many other nervous manifestations, I should recommend the bromide of potash or ammonium, and should these fail would resort to the opiates. Many physicians in correspondence with me, have expressed themselves warmly upon this subject, advocating even large doses of morphine. One of our very successful practitioners tells me, he would not treat a case of hæmorrhagic malarial fever if he was deprived of the use of the sulphate of morphia. On the other hand, Dr. Osborn remarks: "Opium is positively

injurious, no one of my cases having recovered where a second dose had been administered. Indeed, I believe that all narcotics and sedative medicines, are decidedly inappropriate." Doctor Sho'l says: "Avoid opiates unless there is diarrhoea."

With this evidence before us, we must be cautious in the use of these agents, and we hope that time and experience will positively settle this important question.

Catheterism may become necessary; it must be used with caution.

Should the bowels be constive, a mild aperient may be administered. We prefer the oleaginous.

Tinct. of iron, mineral acids, elixir vitriol, decoction of bark, compound tinct. of gentian, Hegeman's elixir of calisaya are the tonics preferred during convalescence; and in addition, milk punch, boiled milk, milk and rice, nutritious soups and beef-tea as diet. Doctor T. C. Osborn recommends as an adjuvant to these tonics and stimulants during convalescence, "a cold shower-bath morning and evening."

We should persevere with the tonics and stimulants until the blood of life ebbs completely out, for I am convinced that many cases of haemorrhagic malarial fever terminate fatally from pure exhaustion from loss of blood. In these cases we must urge upon the profession the necessity of persevering *indefatigably* in the use of these agents to the final struggle, and leave no stone unturned for the preservation of human life.

It will be observed from what we have said of haemorrhagic malarial fever, that little has been seen as yet that could be considered of benefit in the treatment of this disease. What then is left us to do? Reason points to its prevention; and thank God who giveth us the victory, something can be done in that direction. *Cure, by the administration of proper doses of quinine, your intermittent fevers, and you stop and stop forever this horrible disease.*

ART. II.—*Outline of Clinical Lecture Delivered at the Charity Hospital*: By JOSEPH JONES, M. D., Professor of Chemistry in the Medical Department of the University of Louisiana, New Orleans. (Reported for the New Orleans Journal of Medicine.)

Leucocythaemia or Leukæmia; (White-Cell Blood or White Blood.)

After the presentation of patients suffering with acute rheumatism, chronic diarrhoea, constitutional syphillis, typhoid and malarial fevers, Dr. Jones exhibited to the Class the viscera of a patient who had died with leucocythaemia; and reviewed the history of the case.

The case had been daily examined in the wards under the charge of Dr. Jones, and had also been brought before the students in the amphitheatre by the lecturer upon several occasions; microscopical examination of the blood had also been made in the presence of the class assembled in the wards, and each student in turn was enabled to verify the correctness of the diagnosis during the life of the patient, by witnessing under the microscope, the great diminution of the colored corpuscles, and the marked and wonderful increase of colorless corpuscles.

The patient, C. F., a German, aged twenty-four years, of full size and height, had been laboring in a malarious district near Galveston, Texas, during the last two years, where he contracted chills and fever.

At the time of his admission into Charity Hospital (ward 29, bed 429,) January 5th, 1869, the patient was pale and sallow with a yellowish greenish tinge to the surface, and with pale bloodless lips and tongue. The anaemia was so great that little or no difference could be discovered between the color of his lips and cheeks; very weak; the slightest exertion caused prostration. Action of the heart irregular, and at times tumultuous with a decided *bruit de souffle* (*bruit de diable*), as in the most marked cases of anaemia. The abnormal sounds of the heart were referred by Dr. Jones entirely to the impoverished condition of the blood, notwithstanding that the patient at times complained of great uneasiness and of a dull pain about the heart. This opinion was based not only upon the characteristics of the sounds of the

heart, but also upon the evident anaemic condition, and upon the fact, that the patient never suffered with any irregularity of the heart, or uncomfortable feelings and pains in its neighborhood, until the red corpuscles had been greatly reduced apparently by the action of malaria. Liver and spleen both enlarged. Appetite pretty good; bowels torpid; the patient has at times complained of cramps in the bowels.

The bowels were kept open by an occasional purgative, as blue mass or the compound cathartic pills of the U. S. P., generous, nutritious diet was ordered, and the effort was made to enrich the blood by the continuous use of iron, in combination with the sulphate of quinia. Arsenious acid was in like manner given in small doses for its tonic and alterant properties, as in the following formula: R.—Precipit. iron (iron by hydrogen), ʒiv; sulphate of quinia, ʒij; arsenious acid, grs. ij; extract of rhubarb, ʒij; mix, and divide into one hundred pills; one pill three times a day. After taking the preceding, and other preparations of iron, the patient was placed upon nitro-muriatic acid, with the intention of exciting the action of the liver, and at the same time for the benefit of its tonic and anti-periodic properties. These measures were productive of no perceptible beneficial results—the blood remained in the same anaemic state, and mercurials and nitro-muriatic acid exerted no beneficial effect whatever upon the liver, and the patient retained the same sallow, greenish-yellow hue; the pain and distress about the heart, and in breathing also, so far from being relieved, continued to increase. Other cases of chronic malarial poisoning in the same ward recovered slowly but steadily under this general mode of treatment, even when the diseased state was complicated with chronic diarrhoea and dysentery. These facts confirmed the view that this was not a simple case of malarial poisoning, but an example of that comparatively rare form of disease, characterized by a great diminution of the colored corpuscles, and a marked increase of the colorless or white blood cells.

The correctness of the diagnosis was confirmed by subjecting the blood of the patient to careful microscopical examination; and this was done in the presence of a large number of the medical students of the University of Louisiana, assembled in the

ward; and the opportunity was thus embraced of making comparative examinations with the blood of healthy individuals.

In the patient laboring under leucocytæmia, the red blood corpuscles were not more than one-fourth as numerous as in health, and did not perhaps exceed thirty parts in the thousand of blood, whilst the colorless corpuscles were proportionately increased in numbers.

The tonics, with nutritious diet, and small portions of wine and brandy, were continued, and the strength of the patient, as well as the fullness of his flesh appeared to remain the same; the only distressing symptom was the dull pain in the region of the heart, accompanied at times with palpitation, irregular action and difficult respiration, restlessness and a feeling of prostration.

On the evening of the 13th of February, the patient finding the gate of the hospital yard open, and the attention of the watchman engaged, slipped out, and wandered about the city, drinking and eating. Next morning the patient was brought to the hospital in a state of prostration.

The marks of death were evident in his pale, ghastly countenance, widely dilated pupils, heaving irregular respiration, irregular palpitating heart, thread-like pulse, and the utter prostration of the muscular system. The patient had just strength sufficient to communicate an account of the imprudence by which he had forfeited his life, and to state the fact that he had eaten a great mixture of oranges, oysters, and sweet-meats, and drank largely of whisky and beer, and that he had vomited freely and was suffering with pains and cramps in his bowels.

Revulsives and stimulants failed to cause reaction, and he died at four o'clock, P. M.

The lungs are healthy, without any adhesions. The heart is pale and flabby, or more correctly anaemic, but no structural alteration can be discovered in the cavities, walls, or valves.

The correctness of the view, that the sounds of the heart were due not to structural alterations, but to the watery condition of the blood, is thus confirmed by the autopsy. The pericardium was neither inflamed nor thickened, although it contained about three fluid ounces of golden-colored serum, which had evidently been effused on account of the watery condition of the blood.

Light-colored, pinkish clots were found in the cavities of the heart, closely attached to the muscular columns.

The mucous membrane of the stomach was congested, and exhibited marks of irritation. The mucous membrane of the small intestine was greatly congested and of a deep red color, and its surface was coated with bloody mucus. In the watery state of the blood, the irritation of the mucous membrane of the small intestines, by the undigested and acid matters of the stomach, was attended with a haemorrhage from the mucous membrane. Mucous membrane of colon congested to much less extent than that of the small intestines. The lesions of the stomach and small intestines were, in connection with over-exertion, sufficient to account for the sudden termination of this case.

The liver was in a state of incipient cirrhosis, enlarged and hardened, and the lobules of the liver started from the fibrinous capsules when sections were made. This condition of the liver was referable to the former use of ardent spirits by this German laborer, and was in no manner connected with the leucocythemia. Gall bladder filled with dark-green bile.

The spleen was enlarged four times its natural size, softened, and under the microscope, its dark, almost black pulp was discovered to be composed in large measure of disintegrating and disintegrated colored blood corpuscles, and the haematin of the blood was found in the state of angular dark-brown and red masses.

The lymphatics of the mesentery were enlarged and softened. The lymphatic glands of the mesentery were almost completely disorganized, and broken down into a soft diffuent pus like mass. Under the microscope, the softened structures of the lymphatic glands were found to consist of oil globules, granular matter, and the altered tissues of the glands.

The fluid blood from all the venous trunks, resembled most nearly colored water.

The muscles, and the trunk and extremities generally, appeared full and round, and there was no special loss of fatty matters.

This case presents the following points of interest to the student :

1. *The colored blood corpuscles were greatly diminished ; while*

there appeared to be no special increase or diminution of the fibrin.

The diminution in different degrees of the globular elements of the blood, whilst the fibrin preserves its normal proportion, is the fundamental character of anæmia. In anæmia, the diminution of the principles of the blood becomes, independent altogether of the solids, the point of departure and sole appreciable element of the disease. This state may arise from the action of various causes, as of certain poisons (lead, mercury and malaria,) insufficient diet, and exhausting labors in dark damp situations. In the description of anæmia, amongst the laborers in the mine at Auzin, given by the celebrated Hallé, the most remarkable symptoms were the blanching of the whole surface of the body, a wan-yellowish tint, not only of the skin, but also of the conjunctiva, the inner side of the lids, the interior of the lips and of the mouth, and of the tongue itself. No ramifying of capillary vessels upon conjunctiva or the gums, no vein apparent upon the arm, forearm, or back of the hand. At the autopsy there proved to be a general deficiency of blood, and an universal paleness of all the parts naturally red. The treatment which succeeded best, was the use of chalybeated tonics. This anæmia was attributed to the residence of the workmen in a subterrenan gallery, where the ventilation was imperfect. In this damp atmosphere, the respiration was impeded, and the water which trickled through the mine exhaled an odor of sulphuretted hydrogen. The invalids having pain in the abdomen, it was at first supposed that the disease was analogous to the painter's colic; but the treatment prescribed under this impression proved unsuccessful.

In the present case, the general fullness of the body and limbs remained, notwithstanding the great loss of colored corpuscles; and the same *embonpoint* has been recorded as existing in some patients who have died suddenly in the anæmic state.

As the disease was unaccompanied by any marked febrile excitement, and as there was no special failure of the appetite, and as the watery elements of the blood and tissues were not diminished, there appeared to be no cause for the rapid or even appreciable wasting of the tissues of the body, notwithstanding the great diminution of the colored corpuscles.

The most prominent symptoms of this case, as the great muscular

prostration, debilitated and irregular action of the heart, and tendency to syncope upon exertion, appeared to be directly referable to the diminution of the colored blood corpuscles.

The gases of the blood, carbonic acid, nitrogen, and oxygen, are, for the most part, contained in the colored blood corpuscles; and Davy, Nasse, Scherer, Magnus, and others have ascertained that the serum possesses in a far less degree than the defibrinated blood, the capacity of absorbing oxygen and carbonic acid, and Lehman has convinced himself, that at least twice as much air is developed from a volume of whipped blood, *in vacuo*, as from an equal volume of serum, that has been strongly stirred or shaken with atmospheric air. Van Maack has found that a solution of haematin possesses a decided power of attracting oxygen; and Scheur has not only convinced himself of the accuracy of this observation, but at the same time ascertained that a little carbonic acid is developed after the absorption of the oxygen. Water absorbs only 0.925 per cent of its volume of oxygen, whilst according to Magnus, from 10 to 13 per cent may be taken up by the blood; this greater force of absorption in the blood can only depend upon certain conditions, and principally upon the red corpuscles; only from one-fourteenth to one-eleventh of the oxygen absorbed by the blood, and which varies from ten to thirteen per cent, can be absorbed mechanically, that is to say, by the water, or can consequently exist free in the blood; the remaining oxygen, that is to say from thirteen-fourteenths to ten-eleveths, must therefore be fixed by certain blood constituents; but this is only conceivable through the agency of some chemical attraction, however slight that may be; and the blood corpuscles must be regarded as the chief agents in affecting this loose or unstable combination of the oxygen absorbed during respiration.

These facts, established by the labors of various chemists sustain the view which ascribes to the blood corpuscles the function of absorbing oxygen, and giving it partly off in the capillaries.

It is well known, that the uses of oxygen in the animal economy are four-fold.

First.—To build up the structures and prepare the nutritive materials. The nitrogenized matters of vegetables, which form the elements of the structures, although similar in constitution to

the nitrogenized animal structures, must still pass through certain chemical and physical changes before they become integral parts, in which oxygen plays the most important part.

Second.—Oxygen aids in the constant metamorphosis of structure, and in the removal of the waste products. Under the action of the oxygen, introduced through the lungs, the nitrogenized elements are broken down into the simple compounds as urea and uric acid, and the simple elements as phosphorus, sulphur and carbon, are converted into acids, as phosphoric, sulphuric and carbonic acids.

Third.—One of the most important uses of oxygen is to sustain animal temperature. Oxidization is often so slow and imperceptible in its process, that we do not notice the development of heat, because being developed in very small quantity, it is almost instantly radiated away to surrounding bodies, and never accumulates. Thus the oxidation of iron and other metals in the atmosphere, is unattended with heat sensible to the casual observer. If, however, we examine this process of oxidization, which is continually going on upon the surface of our globe, we will find that the whole amount of heat developed during the oxidization of a given amount of matter is the same, whether the process of oxidization be slow or rapid. Oxidization may also go on with a sufficient degree of rapidity to cause a sensible elevation of temperature without flame or open combustion, as in the case of fermentation, and the smouldering combustion of iron pyrites. Oxidization may also go on at a dull red heat, as in the case of spongy platinum, heated and held over alcohol.

It is capable of demonstration, not only that oxygen is absolutely essential to the commencement and continuance of the life actions of all animals, and that the animal temperature is sustained mainly by the union of oxygen with the various elements of organic structure; but also that a definite temperature is absolutely necessary to and is an active agent in promoting the essential changes of nutrition and secretion and excretion, and that the intelligence and activity of animals depend absolutely upon the constant action of oxygen. Oxygen in its free state, is supplied to animals during respiration; the essential act of which is an interchange between the carbon and oxygen of the fluids

and solids of living beings. In an animal of homogeneous structure, as the simple cell animalcule, every part of the exterior surface, and internal surface, exposed to the medium in which it lives, performs the functions of respiration. Animals having this simple form of respiration, have no special organs and apparatus, have no means or power of rapidly generating heat, and consequently their temperature depends upon, and varies with that of the surrounding medium. As we ascend in the scale of created beings, the apparatus of respiration becomes more complicated, the chemical and physical changes of the molecules of their solids and fluids become more rapid and energetic, and all the organs and apparatus are correspondingly developed.

In the high orders of animals, the respiratory system is confined to a definite portion of the exterior, or internal membrane, which is developed within a small space, into a great extent of surface, so as to render the contact with the air or water, as extensive as possible, without any loss of room or power. In fish, the blood goes out to meet the oxygen contained in the atmosphere, dissolved in the water.

In land animals, the atmospheric air is introduced into their lungs, which may be regarded as membranous bags, divided into a greater or less number of compartments or cells according to the rapidity of the respiratory process, and consequent chemical and vital changes. By the division of the lungs into a great number of cells, over and around which the blood-vessels ramify, nature acquires an immense surface, so that the blood spread over this surface may be rapidly oxygenated. A large amount of air must be introduced into the lungs, and hence the respiratory apparatus for expanding the cells.

The perfection of this apparatus as a general rule corresponds with the development of the lungs and circulatory apparatus, the number of colored blood corpuscles and the general perfection of the animal.

Any change in the temperature of an animal is uniformly attended with disturbances in the functions of the nervous and muscular systems; and in the nutrition and secretion and excretion.

The more simple and rudimentary the construction of an ani-

mal, the less power will it possess of generating sufficient heat to resist the changes of the surrounding atmosphere, and if its temperature falls below a certain point, the nervous and muscular actions become deranged or depressed, and the animal becomes *torpid*.

The fourth office of oxygen, is to aid in the generation of the physical forces by which the muscular and nervous systems perform their peculiar functions or acts.

The oxygen absorbed into the blood during respiration, as well as the blood itself, and the heat which is produced in this complex fluid, by the unceasing chemical changes, must be carried to every molecule of living organized matter. If the molecules be not supplied with oxygen, heat and the elements of structure, death will take place. To accomplish this essential condition of life action, Nature again compresses the natural physical and mechanical laws into her service. A powerful apparatus is needed to propel the elaborated blood, with its oxygen, heat and elements of structure to every part of the organized tissues.

Hence we have the heart, a powerful muscle, which incessantly acts, propelling and returning to and from all parts of the system, the nutritive fluid. The fundamental, the essential condition and object of circulation, is the bringing of the blood, with its oxygen, heat and elements of structure, into intimate connection or contact, with the organic molecular elements of all the fluids and solids of the organs and tissues of organized beings.

The perfection of the circulatory apparatus in the various members of the animal kingdom corresponds with the development of the cerebro-spinal nervous system, with the activity and intelligence, and with the perfection of the respiratory and muscular apparatus. Respiration—the introduction of oxygen, therefore is the great cause of the circulation—and the distribution of the blood by the circulatory apparatus is the great source of the mechanical forces of living animals. The objects of the circulation are, therefore, the distribution of the materials of nutrition, the introduction and distribution of oxygen, and the removal of the products of the waste of the tissues.

The perfection of the organs and apparatus, and the rapidity of the life actions, and the power, temperature and intelligence

of animals, depend, therefore, in great measure, upon the rapidity with which the element oxygen is introduced into the circulatory fluid, and distributed to every living molecule of matter.

If this chain of reasoning be admitted, the student is enabled upon physiological grounds, to understand why a *diminution of the colored blood corpuscles as in this case of leucocythemia, is attended with loss of nervous and muscular force, and with debility in the action of the heart, and consequent oppression in breathing.*

The blood corpuscles must not be regarded solely in the light of oxygen carriers, but collectively as an immense gland which elaborates materials for the nutrition of the nerves and muscular tissues. Each blood cell exerts important chemical and physical changes upon the surrounding liquor-sanguinis, and elaborates products which are destined to fulfil distinct offices in the nutrition of the organs and tissues. On this account also diminution of the colored blood corpuscles is attended by depressed and deranged nervous and muscular actions.

2.—*The diminution of the colored blood corpuscles in this case of leucocythemia, appeared to be referable primarily to the action of malaria.*

The patient had lived in a low malarious region, and had suffered with malarial fever for months. In a case observed by Dr. Jones, at Franklin, Tennessee, in 1868, to which he was called in consultation with Professor Paul F. Eve, M. D., the leukemia was in like manner, subsequent to and coincident with intermittent fever, and the prolonged action of malaria. In this case as in the one now under consideration, quinine and the preparations of iron, exerted no marked beneficial effects ; the palor was extreme, no difference could be noted between the color of the lips and that of the forehead ; there was great muscular debility and distressing oppression in breathing at times, especially upon slight exertion. This case terminated fatally in like manner.

As far as the results of the observations and investigations of Dr. Jones extend, the colored blood corpuscles are more uniformly and rapidly destroyed in some cases of malarial fever than in any other acute disease, with the exception perhaps of pyæmia, in which case an organic poison is directly introduced into the blood vessels, and rapidly destroys the colored blood corpuscles. And

it is worthy of note that in pyæmia we have, as in malarial fever, chills and a sallow jaundiced hue. The suspension of the process of digestion, and the perversion and partial suspension of secretion and nutrition, and the rapid chemical changes and corresponding rapid metamorphosis of matter—the universal attendants, or rather phenomena, of acute diseases, must necessarily be attended by a destruction, to a greater or less extent, according to the severity of the disease, of one or all the constituents of the fluid which supplies the elements of secretion, nutrition, and chemical change; these causes produce destruction of the colored blood corpuscles in all acute diseases, but in malarial fever we have an increased destruction which cannot be referred to these causes.

It is certainly of interest to determine the place of the destruction of the colored blood corpuscles, and to consider the question, whether their disappearance be entirely due to the cessation of their birth? Do they diminish simply because new ones do not take their place?

With reference to the place of the destruction of the colored blood corpuscles, it may be affirmed that they undergo important alterations in the spleen and liver, during the active stages of malarial fever. In examinations of the organs after death, from all the forms of malarial fever, intermittent, remittent and congestive, Dr. Jones has observed that the dark blood of the spleen and liver does not change to the arterial hue when exposed to the oxygen of the atmosphere. After death from phthisis, cirrhosis of the liver, organic disease of the circulatory apparatus, apoplexy, tetanus, and mechanical injuries, etc., so far as his observations extend, the blood of the spleen and liver always changes to the arterial hue, upon exposure to the action of the oxygen of the atmosphere. Chemical examinations of the blood of the liver during health, have shown that the blood corpuscles are more numerous in the blood passing out of this organ, than in the portal blood.

The blood corpuscles appear to originate, to a certain extent in the liver, and undergo certain important chemical and physical changes in that organ.

In malarial fever, important changes take place in the blood

passing through the liver; many of the colored blood corpuscles are destroyed, and the coloring matters infiltrate the structures, together with the altered bile, impart the slate color to the exterior, and the bronze color to the interior, of the malarial fever liver. In some cases the coloring matter derived from the disintegrated blood corpuscles, exists in the form of granules in the tissues of the liver. These granules, however, are by no means necessary to the slate and bronze color.

Whilst the facts as yet accumulated are too few to warrant any very general or dogmatic assertions, they certainly incline our minds to the belief, that the destruction of the colored blood corpuscles in the liver, is dependent upon the disturbance of the relations of the liver to the blood, rather than to the destruction of the colored blood corpuscles in the capillaries and blood vessels, independent of the action of the liver, simply by the direct action of the malarial poison.

The blood and blood corpuscles undergo remarkable alterations in the *spleen* during malarial fever.

Upon the exterior, the malarial spleen presents a dark-slate color, resembling the color of the malarial liver. When held in the hand, the malarial spleen feels like a bag of soft mud. The capsule and trabecular break upon the slightest pressure, and the fingers will often plunge into the organ, and during the most careful handling.

The reddish-brown mud (pulp) of the malarial spleen, consists almost entirely of colored corpuscles in various stages of alteration and disintegration. With the microscope it has been demonstrated that in many cases, especially those of long standing, the mud of the spleen contained numerous granules of a reddish black color. These black granules were frequently conglomerated together, forming dark flakes, like the coffee-grounds sediment of the black vomit of yellow fever, and were, without doubt, altered colored blood corpuscles. In many malarial spleens, the colored blood corpuscles have presented swollen and distorted and irregular forms. This alteration of the spleen has been found by Dr. Jones, in all cases, and in all periods of malarial fever. In one case, in which the patient died in thirty hours after the commencement of the attack, the spleen presented the same enlarged

and softened condition, whilst the liver presented only spots of the slate and bronze color.

When we reflect that the malarial fever spleens often weigh one and two, and three or more pounds, and that their principal weight is due to the presence of colored blood corpuscles; when we farther reflect that the whole amount of blood existing in the body of a grown man is about twenty pounds, and that not more than nine pounds of this exist in the form of moist colored blood corpuscles, it is evident that the spleen in malarial fever, forms a grand sepulchre for the colored blood corpuscles.

In the present case of leucocytæmia, the spleen was enlarged, softened and filled with disintegrating colored blood corpuscles, as in the true malarial spleen; and the changes of the blood in this organ appeared to have been undoubtedly due to the action of malaria, which is capable of inducing this state of the spleen suddenly as in acute attacks of malarial fever, or slowly and almost entirely without the phenomena characteristic of fever, and without any aberrated nervous action.

3. *Not only were the colored blood corpuscles greatly diminished in this case of leucocytæmia, but the colorless corpuscles were greatly increased.*

The increase of the colorless corpuscles, in an inverse ratio to the decrease of the colored corpuscles is the distinctive characteristic of this disease, distinguishing it from simple anaemia.

If the origin and offices of the colorless corpuscles, as well as their true relations to the colored corpuscles were fully established, a great advance would be made in the natural history of this singular and almost universally fatal disease.

Dr. Jones discussed the origin and development of the colorless and colored corpuscles, and endeavored to determine whether the diseased state of the blood, was due to a simple arrest of the development of the colored corpuscles, or to an actual increase of the colorless globules; and closed his lecture with a succinct account of the history of this disease.

✓ ART. III.—*Wound of Neck and Ligation of Internal Jugular and Facial Veins*: By R. W. GIBBES, M. D., of Columbia, S. C.
BY most leading surgical authorities, even of the present day, in the singularly limited space devoted in their writings to *veins and venous haemorrhage*, the great bugbears of phlebitis and pyæmia as effects of the ligation of veins are so prominently brought forward that the practitioner, in my humble judgment, is too apt to be deterred—except in extreme emergencies—from the proper procedure. Wounded veins when *not ligated*, however, are much more liable to be affected with such dreaded results in consequence of the admission of pus and decomposing sanies from the contiguous parts; for as Mr. Travers well said more than half a century ago, these vessels “are indisposed to inflame; but when excited, inflame by continuity, and therefore it is that the constitution sympathizes so deeply.”

The real danger to be feared from the ligature of veins as well as from arterial ligation, is *secondary haemorrhage*, as has been clearly demonstrated by Dr. S. W. Gross, in his able and almost exhaustive paper on “Wounds of the Internal Jugular,” in the American Journal for 1867, and to which the reader is specially referred for fuller information.

The following interesting case is added to the literature of the subject, and it will be observed, that the rare nature of the opening into the vessel was precisely similar to that in one recorded by Dr. S. D. Gross, who, in removing an encysted tumor, sliced off a large vein, supposed to be the *facial*, just where it emptied into the jugular. A ligature was placed above and below the orifice, and the man made a good recovery.

Mr. B., aged fifty years, of robust habit, being harassed by business difficulties, took to drink and was ill with delirium tremens for a fortnight, about two months ago. After recovery, soon began to lose his rest and take whisky again. Attempted suicide with a razor at half past five A. M., December 5th, 1868. I reached him in about thirty-five minutes, and found him standing up, with his wife and friend holding his hands—had lost nearly two quarts of blood before it could be stopped by compression; coagulation had ensued—he said I “could do nothing,” as he had “made too deep a cut;” appeared then quite rational.

On getting him to lie down on the floor, near a gaslight, I found a frightful gash of four and a half inches extending from the right mastoid process down the neck, almost exactly along the anterior border of s. c. mastoid muscle,—superior third superficial, middle and lower third quite deep; some of the sternal fibres of the muscle are divided very obliquely. Below the middle or anterior lip a triangular flap of skin had been made by a second and horizontal cut directed towards the larynx, but extending only about an inch. Before I could discover what vessels were injured, a sudden torrent of venous blood poured forth from apparently at least two orifices, and about a gill was lost before I could arrest by compression. I awaited several minutes and sent for professional assistance. Relaxing my grasp and finding it did not bleed again, I requested the patient to remain very still, but becoming obstreperous he got up and stood erect for ten or fifteen minutes, two persons holding his hands gently while I awaited anxiously for syncope, and endeavored to prevail upon him not to struggle. The Priest arriving we got him to lie down, but as his head touched the floor there came a profuse gush of blood, and he lost half a pint in a few seconds. The Priest commended his soul to his Maker and proceeded to Extreme Unction, while I exercised compression for perhaps fifteen minutes until the arrival of Dr. Fair, during which interval slight convulsions occurred. Coagulation having again taken place, we removed him to a better light, and everything being in readiness for ligation, I cautiously removed the compress and some clots. Drawing back the inferior portion of s. c. mastoid muscle and extending the incision one inch farther below, the *internal jugular vein* was seen distended as large as the finger, with a clot projecting anteriorly from an orifice about the size of a large buckshot.

With grooved director and forceps the vessel was soon separated from the carotid and pneumogastric, and secured with silk ligatures both above and below the orifice, leaving an interval of about an inch between the two. Dr. F. meanwhile compressing efficiently with index finger of each hand. A free oozing was then observed from the open *facial* just under the inferior maxilla, and a small ligature was placed around it. This vessel had been sliced off just where it empties into the jugular, in the deepest

part of the wound, the razor having grazed the latter vein anteriorly without wounding the carotid. Had the wound been either a little more or a little less oblique, a fatal result must have occurred before my arrival, as both main vessels, besides perhaps the external jugular would have been cut across, or else one of them would have been opened longitudinally for one or two inches. The *omo-hyoid* muscle was divided near its tendinous centre, and the loop of the *communicans* and *descendens noni* with some filaments of the superficial and deep-seated branches of the cervical plexus of nerves were of course also involved.

After ordering "soup or milk-punch to be given feely, we left the patient in pretty fair condition under the circumstances.

Eleven A. M.—He has not slept; taken milk only once, with half ounce of whisky, and threw it up, complains of headache and buzzing on right side; right arm useless, and it "feels dead," as does the right side of chest.

Six P. M.—has not slept, threw up boiled milk and has taken about eight ounces of beef essence. I placed about three-quarters of a grain of morphine on tongue, and prescribed: Rx—Potass. bromid. 3ii; morph. acet. grs. ii; spts. ammon. arom., aq. cinnamoni, aa ʒss. S. A teaspoonful every two hours if necessary for sleep, etc.

December 6th, half-past nine A. M.—Slept well from first dose of mixture two hours after the powder on tongue; reaction moderate, feverish and thirsty, quite deaf on right side.

Six P. M.—Been pretty quiet with some naps; has taken one dose more of anodyne, and soup at intervals; buzzing, numbness, and some difficulty in swallowing.

7th, half-past nine A. M.—Rested pretty well after one dose of mixture, but complains as before.

8th, eleven A. M.—Much the same; some thin pus from middle and lower part of wound, very little sensibility on squeezing it; coughs a good deal. Platysma myoides quite devoid of feeling below and behind the wound.

9th, eleven A. M.—Rested last night after two doses of anodyne; upper third of wound united; middle, where the three ligatures are, gapes open between stitches on removal of isinglass strips; suppuration healthy.

10th and 11th, 11 A. M.—Does not suffer so much with head and is getting on fairly, except that the cough is troublesome. Expectorates sputum—muco-purulent and sometimes streaked with blood; some sub-crepitant râles low down on right side with diminished resonance on percussion. Eighteen months ago had severe pneumonia of left side, and twenty years back was ill from same disease of right lung; above and just below clavicle no sensation; paralysis of right arm not so great, but very little use of fingers, can flex the arm and even bring the hand to mouth, but the thumb turns inward on raising the hand which cannot be supinated. Continue anodyne, and apply cataplasm to side.

12th, ten A. M.—Took two doses last night and rested only tolerably; suppuration free, wound dressed with weak solution of carbolic acid.

13th, 14th, and 15th.—Wound healing rapidly, all closed except about one and a half inches below ligatures.

19th.—On dressing the wound, the main ligature came away with a piece of the dead jugular attached, the scissors being cautiously used to assist in detaching the slough.

20th.—The lower ligature is removed, leaving only the small one on the facial vein. Last night took *bromide of potassium*, twenty grains every two or three hours, for five doses, without morphine, but could sleep only a little; cough troublesome; nervous, and low spirited about paralysis of arm, although I encourage him. R.—Chlorodyne, syr. ipecac, tinct. tolutani, aa gtt. x, every three hours if necessary. R.—Tinct. mur. ferri, gtt. xv, before meals.

22d.—Does not rest well—still nervous and depressed—says right side of neck, chest and the arm “feel so dead;” weather being fine and warm, advised him to walk about room and cheer up. Apply a blister one by three inches on radial side of arm over the *supinator longus* muscle.

23d.—Blister has drawn well; dressed it with five grains quinine morning and evening, some *crepitus* on full inspiration at inferior portion of right lung, cough with muco-purulent expectoration. Ordered a blister seven by four inches under right arm, and *tinctura cinchonæ* instead of the iron.

24th.—He has finished twelve or fourteen doses of the cough

mixture and prefers the first prescription of morphine, bromide potash and aromatic ammonia; restless, eccentric and nervous; ordered arm rubbed with a strong camphorated liniment.

30th.—Wound cicatrized and small blister healed, arm better, can supinate imperfectly, but fingers are weak, and he writes his name with great difficulty—and almost illegibly; apply blister lower down over anterior and inferior third of radius.

31st.—I dressed¹ blister with four grains quinine, It is very hard to make him get out of bed and take exercise.

1869, Jan. 12th.—Patient *will* have whisky sometimes, "not for its taste but for its effects," although against positive orders.

Feb. 1st.—He still takes morphine, three or four doses daily—saying he cant do without it, and it keeps him depressed and without energy; has only been out of doors a little way three or four times; arm improved, but yet there is little strength in the fingers. Electro-magnetism employed daily with benefit; looks well physically.

March 2d.—I saw Mr. B. to-day, and he is quite well, except some weakness in fingers and complete paralysis of sensation in *platysma myoides* muscle, but he will not take exercise. He has no cough at all.

March 15th.—A few days ago I learn that Mr. B. made his appearance on Main street at last, but was carried home very drunk.

April 2d.—I learn he is still drinking.

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ART. IV.—*Observations on Persistent Priapism, with a Case; Treated successfully by the Bromide of Potassium;* By ROB'T B. S. HARGIS, M. D., of Pensacola, Florida.

THE very interesting case of "*idiopathic priapism*," recorded in "*The New Orleans Journal of Medicine*," for January, 1869, suggests a similar one that fell under my care several months since, and which I purpose to state in this paper, *en regle*, after a few observations.

Idiopathic Priapism, so called,* may be defined, a persistent

* An objection to the term *idiopathic priapism* is here implied, which demands an explanation: I make no objection to the word priapism, but to the adjective *idiopathic* I do,—

erection of the *penis*, unconnected with concupiscence, “*sans penchant à l'acte venérien*,” technically, (if I may be permitted to coin an appellation *e re nata*), *Priapismus** *sine concupito persistens*.

The obscurity of this form of priapism, its intractable nature, the extreme anguish it occasions, and its not *very* infrequent occurrence, invoke the deepest interest of the practitioner of medicine. But, unhappily, in regard to its nature, amidst the vast literature of the medical sciences we look in vain for information; no place has yet been assigned it in any of our systematic treatises, nor is it scarcely mentioned in any work that treats, specially, of the diseases of the genito-urinary organs. It is, however, mentioned by some writers on pathology, and a few cases have been recorded in some of the medical periodicals. Prof. Gross† observes in regard to *morbid erection*, that he “never inspected a case of this kind after death, but observed one, several years ago in a young mechanic, which lasted for nearly four months in spite of the most rigid antiphlogistic measures.” “It may be produced,” he says, “by inflammation, followed by an effusion into the cells of the cavernous body.” Craige‡ merely alludes to priapism as “a morbid state of the erectile tissue of the cavernous body.” Dr. B. Dowler§ alludes to it and remarks: “except as a traumatic lesion or symptom of some other disease, it seems to have been singularly neglected, or rather never noticed.”

In the Half Yearly Abstract of the Medical Sciences, published

for in this instance, as in many others, it is vague, indefinite and insignificant. It not only fails to give any idea of the nature of the affection to which it is applied, but renders it absolutely a negation. “Words,” says Sauvages, “are good only in respect to their signification.”

* The term priapism, (*priapismus*, from *Priapus*, a mythological divinity, son of Bacchus and Venus, at whose shrine the ancients of rural districts were wont to worship,) signifies, properly, inordinate lecherous desires. But usage has rendered it a proper term to signify a morbid condition of the penis, characterized by continuous and frequent sensuous “*horny*” erections. Now, therefore, assuming the term *priapismus* to be generic and applied to a class or species, we may have three orders or varieties, viz: *Priapismus simplex concupiens*—morbid, lustful erection, such as mentioned by Lillemand, Bartholow and others, as the result of masturbation, etc. *Priapismus sine concupito simplex*—simple priapism without lechery, as occurs at night from distention and irritability of the neck of the bladder; and *Priapismus sine concupito persistante*—the same under consideration.

† Elements of Pathological Anatomy, by Paul F. Eve, M. D.; etc.; 3d edition, p 372.

‡ Elements of Pathological Anatomy, by David Craige, M. D., F. R. S. E., etc; 2d ed., p. 176.

§ New Orleans Medical and Surgical Journal, vol. xiv, p. 642.

by Henry C. Lea, Philadelphia, for July, 1867,—London *Lancet*, February, 16, 1867--a brief detail is given of a case of persistent priapism that came under the care of Mr. Birkett, of Guy's Hospital, London, in January, 1865. The reporter of this case of Mr. Birkett, mentions in connection with one he himself "saw recently" (1867), in St. Mary's Hospital, under the care of Dr. Hansfield Jones, two other cases which he says *were the only two* instances then, in the records of English surgery; one was recorded by Mr. Callaway in the London Medical Repository, in 1824; the other, by Mr. John W. Tripe, in the *Lancet*, in 1865. All of these are reported as caused by "*extravasation of blood into the corpora cavernosa of the penis.*"

The case of Mr. Birkett had suffered ten days before seen by him; "the penis continued permanently erect after copulation," and gave rise to intense suffering. In order to relieve the sufferer from his extreme anguish, several incisions were made into the cells of the *corpora cavernosa*, a practice, which, Mr. Birkett said, he "would not adopt again." The patient recovered after nearly four months suffering.

Mr. Callaway's case was "exactly similar to the above described." The attack came on immediately after *coitus*, and continued unchanged for sixteen days. It was treated in a similar way, and in a few days the man was able to follow his work."

The one Mr. Tripe met with answers to the same description; erection came on immediately after connection, and continued about four months. "In the course of time the blood appears to have been absorbed, and the functions of the organ to have become perfectly restored." No punctures were made.

Dr. Paul F. Eve*, cites an instance of a man, aged twenty-two years, seized immediately after sexual congress; seen sometime afterwards by *M. Dormeaux*. Bloodletting, leeching, iced applications, cold baths etc., were assiduously applied in the treatment, and recovery took place in four days.

Dr. Hansfield Jones' case, after a persistence of the symptoms for a month, was relieved by incision into the *corpus cavernosum* of one side" and had a speedy recovery.

* A Collection of Cases in Surgery, by Paul F. Eve, M. D., etc.; p. 374.

Dr. Smith's patient was like the rest, identical in nature, differing, perhaps, no more than diseases of the same nature generally do in different subjects.

The case I present in connection with the foregoing, also isonomic, differs, as will presently be seen, only in the absence of complications or secondary lesions or sequences.

Homer, a mulatto, bar-keeper of one of our most respectable drinking saloons, aged twenty-eight years, married, father of four or five children, of temperate habits with respect to food and drink, but addicted to excessive venereal indulgence.

Never had had gonorrhœa, nor any other disease of the genito-urinary organs, seized immediately after conjugation with his wife, with an intensely painful erection; applied cold water assiduously; then had recourse to hot baths and fomentations, took purgatives and afterwards opium. Having obtained no relief, came to me ten hours after the attack in great distress.

Symptoms and condition of the organ.—Countenance haggard and expressive of anxiety,—general demeanor indicative of much suffering and alarm. Intense pain referred to the virile member; sense of weight or heaviness about the *anus* and *perineum*. On inspection, the organ presented an intense rigidity and hardness and stood at an obtuse angle with respect to the abdomen. The glands, *corpora cavernosa*, *corpus spongiosum*, in a word, all the parts of the member were involved—agony increased on slight pressure; temperature apparently natural. No enlargement or signs of disease referable to the *body* of the prostate; bladder nearly empty, no vesical irritation had ever been complained of; no rectal *entozoa*; other functions normal.

Treatment, May 10th, 10 A. M.—Potass. bromidi grs. xv, in solution, every two hours. Four P. M., pain relieved, organ flaccid, but sore. Continue the solution in doses of grs. v, every four hours.

May 11th, 9 A. M.—Has slept well during the night; no pain, but a little soreness; urinates well; appetite good, with buoyant spirits; returns to the duties of his vocation.

July 15.—Has another attack immediately after sexual congress with his consort; applies at the pharmacy for same prescription, and not being able to obtain it in consequence of my absence,

procures an *antaphrodisiac* mixture from one of the employees of the establishment, and after taking it faithfully for fourteen hours without relief, advises me of his condition and gets the following: R.—Potass bromid., ʒij; Aq. pur., ʒiv. M. S. Take a wineglassful every hour in some water.

July 16th.—Saw the patient this morning; he was perfectly relieved. Said two doses were sufficient. I advised a continuance of the bromide in small doses (five grains) three times a day, and enjoined upon him the observance of a restraint on his passions, and urged that it would be better to banish all libidenous thoughts from his mind, if possible, for a time. Nearly nine months have elapsed since, and Homer has continued in good health, and enjoys his connubial felicities as formerly, but not quite, he says, so free of restraint.

The *causes* of persistent priapism are, doubtless, attributable to excessive venery and masturbation. The exciting or immediate causes, *coitus* and *Onanism*, may be, also, a temporary retention of urine, as occurs at night.

Pathology.—In regard to this supremely important consideration, the labors of the pathologist, having failed to provide us with any positive knowledge—facts concerning the *proximate* cause of the affection—no other means as a guide to the interpretation of the phenomena presenting except such as the senses of sight and touch, aided by the light of physiology, can afford, a deductive process—theory, becomes our only alternative.

The physiology of the erection of the penis implicates nervous excitation derived from the brain (erotic ideas). This excitation is transmitted by the pudic nerves to the spinal cord and reflected upon the organic muscular fibres which control the influx and reflux of blood permeating the venous plexuses of the virile member; the vascular net-work of the organ first becomes distended, contraction of the organic muscular fibres ensue, and a normal erection obtains, and is maintained as long as the general orgasm continues unabated, or until the cessation of the venereal mobility, which takes place immediately after, or rather *simultaneously*, *pari passu*, with the emission of semen.

The act of seminal emission is a reflex act, rhymical, regular, orderly, and effected through the influence of the *sympathetic* by

"the successive and co-ordinate contractions of the muscular fibres of the *rasa differentiae* and *vesiculae seminales* and of the *bulbo-cavernosi* and other muscles of the urethra." (Kirke.)

Now this prostatic urethra is very abundantly supplied by the hypogastric plexus of the sympathetic, is extremely sensitive, and when subjected to a sur-excitation from excessive sexual intercourse in susceptible subjects, a morbid irritation is "set up" and transmitted to the nervous centres; reflex action ensues, *continuous contraction** of the muscular fibres, that prevent the reflux of blood from the venous plexuses, obtain, and a *persistent priapism* necessarily follows. Thus the proximate cause, *pathology* of persistent priapism may, *a priori*, be ascribed to, or consist in an *erehism* or *morbid sensibility* or *irritability* of the *prostatic portion of the urethral canal*. Inflammation, extravasation, effusion of lymph, etc., being, when they occur, merely secondary complications.

ADDENDUM.—From the opinions entertained in regard to the proximate cause or pathology of persistent priapism, and the peculiar action of the bromide of potassium on the human organism—its influence over spasm and reflex action of the nervous centres, and particularly from its remarkable efficacy generally, in abnormal irritability of the genital organs, the curative agency of the substance in the case of Homer, was confidently expected.

If any foundation for doubt exist in regard to the remedial influence of the bromide in the first attack, none certainly can be entertained of its efficacy in the last, as it is shown by the record that the man had suffered for fourteen hours while taking the antaphrodisiac and applying other means assiduously, without relief, or even a temporary suspension of pain until the bromide of potassium was again had recourse to, with effect. It is extremely probable that had not the disease, in this instance been controlled by the treatment, some of the accidents, inflammation, extravasation, etc., that obtained in the other cases, would have occurred sooner or later.

April 25th, 1869.

* The conducting power of the sympathetic is slow; and when irritated contractions take place very gradually, and continue to increase in intensity long after the exciting cause is withdrawn.—*Muller*.

ART. V.—*A Remarkable case of Fatty Degeneration of the Heart, Liver and Kidneys, Partial Occlusion of Twenty-four inches of the small Intestine and Renal Calculi:* By DR. A. P. HALL, of Mobile, Ala.

In prosecuting the dissection of an apparently very emaciated subject, in the fall of 1868, at the Medical College, Mobile, Ala., there was found to be an abundance of adipose tissue under the skin in the omentum and bowels, in fact, its deposition was universal, the bowels also being coated with it. The small bowel in three places was contracted to the diameter of a crow quill, each contraction extending eight inches in length, making in all about twenty-four inches of bowel almost occluded at different points.

The heart was one mass of fatty degeneration. The liver likewise. The spleen though not enlarged was very firm and fatty.

The kidneys especially presented interesting pathological phenomena. The right kidney was normal in size, although, completely degenerated with fat, with very little traces of the cortical and medullary portions. The left kidney consisted simply of a layer of fat about half an inch thick, held together by the proper capsule, and some areolar tissue; and within it were found three renal calculi.

The largest of these had three arms that dipped down into as many calyces, and weighed one hundred and twenty-one grains. It was irregular in shape, one inch and seven-sixteenths of an inch long, ten-sixteenths of an inch wide, and seven-sixteenths of an inch thick. The second, more irregular than the first in shape, would readily have been taken for a metacarpal bone, weighed seventy-six grains, was fifteen-sixteenths of an inch in length, (as nearly as could be measured) half an inch in thickness, and ten-sixteenths of an inch in breadth.

The third was about the size and shape of a common bean, weighed twenty-seven grains (apothecary's weight), was nine-sixteenths of an inch long, seven-sixteenths of an inch wide, one fourth of an inch in thickness. They were all very rough in parts. This would have been different probably, if there had been sufficient motion in the organ to allow of the calculi gliding one upon another. The second of these calculi was constricted

around the middle and smooth, which gave it rather a dumb-bell appearance. This shape is supposed to have been produced by the smallest one (the only one of the three unconfined) rubbing around and against it. An effort having been made to preserve a portion of this memorable subject (a Spaniard 59 years of age), the bones were cleaned and prepared for boiling.

After having been in a pot of boiling water for about four hours, they were taken out, and it was observed that the bones of the head and pelvis were particularly soft. They were allowed to remain in the sun a few days, and when examined again they crumbled to dust in the hand, showing a very great deficiency of animal matter. The calculi are of the oxalate of lime or mulberry variety, dark-mahogany-colored, and weigh together, by apothecaries' weight, two hundred and twenty-four grains—six months since they were found. Small portions of them have been lost by handling. What were this man's last ailment's? It will probably suggest itself, that, while the history is not satisfactory, and will never be obtained—as far as it can be obtained, he had brain symptoms, probably due to suppression of urine,—the fatal result was directly produced by uremic poisoning, the result of the diseased state of the kidneys.

ART. VI.—*A Case of Congenital Absence of the Uterus and greater portion of the Vagina, with Remarks:* By S. F. STARLEY, M. D., of Fairfield, Texas.

THE following case is offered not only on account of its importance, as a rather rare form of congenital defect of the female organs of reproduction, but also as illustrating in a striking manner the importance of a correct diagnosis before attempting surgical interference for the relief of such malformations.

A short time before the beginning of our late unfortunate civil war, I was consulted by Miss M., aged eighteen years, on account of an imperfection of the genital organs, which she wished to have remedied if possible. Upon examination, I found her a well formed woman to all external appearance. The mammae were well developed, and the external sexual organs were perfect in all their appointments, but upon separating the labia I found

that the genital fissure was completely closed at a point corresponding with the base of the lesser labia, with a dense thick membrane.

This structure was dense and unyielding; not fluctuating as is the case with an imperforate hymen, that is acting as an obstruction to the escape of the menses.

She had of course never menstruated; but there was no enlargement of the abdomen, no periodic symptoms marking a menstrual molimen, no derangement of the general health, and in short nothing to give her trouble except the knowledge that she was not like other women, and was incapable of fulfilling the marital relation—a thing that she was about to undertake.

With the shoulders and hips elevated, so as to relax the abdominal walls, I made search by external palpation for the uterine tumor, but it was not to be found. I then passed a sound into the bladder, and a finger into the rectum, but the most thorough exploration through every portion of the pelvis in reach of the finger, aided by pressure applied externally through the walls of the abdomen failed to reveal anything answering to even a rudimentary uterus. The sensation imparted to the finger in the rectum was that the thin walls of the bladder and rectum only intervened between the exploring digit and the metallic sound which was kept in the bladder. She stated candidly that she experienced sexual desires, and from this I inferred the existence of the ovaries, though I failed to find any trace of them by the rectal exploration. My conclusion was, that the unfortunate young lady was destitute of a uterus, that if a vagina existed at all, it was in a mere rudimentary form, and that under the circumstances she was not a fit subject for surgical interference.

This I stated candidly to herself and her married sister, who accompanied her to my office, and who was present when the examination was made. I advised her not to enter into the contemplated matrimonial alliance, and warned her of the dissatisfaction and exposure that would probably result.

But notwithstanding this, she was married in less than a month from the time I made the examination. Her husband continued to live with her until sometime during the past winter, a period of about eight years, when he separated himself from her, and brought suit in the courts to have the conjugal noose untied.

She then consulted Dr. J. S. Wills, a "Botanic" practitioner living in this county, (all the parties reside in this county,) who pronounced her case to be one of imperforate hymen, and promised to procure the assistance of a *Surgeon* and relieve her of her unfortunate dilemma.

She accordingly placed herself under the care of Dr. Wills, at his own house; and the *Surgeon*, Dr. J. B. Conger, assisted by Drs. J. S. Wills and Means, proceeded to perform the operation in the following manner: (The statements regarding the operative procedures and the part taken in it by the different parties, were made to me by Dr. J. S. Wills.) An incision was made from a point near the meatus urinarius to the place usually occupied by the fourchette. The obstructing body was a dense cartilaginous structure, and beneath it was found a shallow fossa, not more than half an inch in depth. The operation was performed under the impression that there was a vagina and a uterus, and that the latter was distended with accumulated menstrual fluid. This conclusion was arrived at (as Dr. Wills informed me) by the gentlemen finding a tumor in the abdomen quite as large as the uterus of a woman three months advanced in pregnancy. They however made no exploration by the rectum to ascertain whether the supposed uterus could be felt through that route, and whether there was a vagina distended with fluid, as must have been the case if there was so large a collection of menstrual fluid. Suffice it to say, however, that the incision made did not give immediate vent to the aforesaid pent up liquid, and the statements of the patient were relied upon to prove that a quantity not less than a quart flowed away subsequently. The abdominal tumor too was gone and therefore it was decided that your unlucky correspondent had committed a sad blunder in his diagnosis made some eight years before, and that the cure now being certain it was best to interpose and if possible put a stop to the judicial proceedings instituted by the husband for divorce, and restore to him his now happy and competent wife.

The husband, however, proved obstinate; and I was summoned to attend court as a witness in his behalf,—Dr. Wills appearing on behalf of the defense. The doctor was kind enough to call at my office and explain all to me; and with such an array of facts (?)

it did seem as if I had committed a most deplorable blunder in reference to this unfortunate patient. It seemed, too, that my reputation was destined to suffer in proportion to the magnitude of my blunder; for the matter had already become a subject of extensive comment and criticism by the non-professional and vulgar as well as the *learned*. This, however, is a digression for which I beg the reader's pardon. The Doctor finding that I was hard to convince, and that I felt bound to testify in accordance with my former convictions, kindly invited me to accompany him to his home where the patient was and satisfy myself by an examination. I accepted his kind offer and by his consent took with me Dr. W. G. McInnis, to participate in the examination.

Examination. Found the patient emaciated and quite anaemic, suffering considerable soreness from the irritation of a sponge tent constantly worn since the date of the operation, now more than a month. This sponge tent was tightly packed into the shallow cul de sac, above described, and of course the parts were irritable and the cut edges of the divided membrane unhealed. At the bottom of this shallow fossa was a small opening, around which the walls of the short rudimentary vagina were gathered into a kind of pucker that looked very much as if a string had been tied round it at that point. In the centre of this was the little opening alluded to, and which Dr. W. believed to communicate with the *uterus*, and of course regarded as the channel through which the large quantity of menstrual fluid had escaped.

Into this opening I put a probe and found that it did not exceed half an inch in depth. And then with my finger in the rectum, I could feel the end of the probe through the rectal walls, and the little structure like a very short appendix vermiciformis into which the instrument was inserted. Beyond this the structure tapered off as a very small fibrous feeling cord. Then with the fingers in the rectum I explored the pelvis as thoroughly as possible. But with the aid of external palpitation, the patient's shoulders being raised so as to relax the abdominal walls, I was utterly unable to detect any thing that would answer to even a rudimentary uterus, notwithstanding the assurances that there *was* one, and that it had so recently contained a large collection of fluids. Nor was Dr. Wills, who now followed my example of

exploring by the rectum, more fortunate in his search for the missing organ. It was no where to be found; and whether the gentlemen will ever be able to account for its disappearance is more than I can tell. However, Dr. Wills has since told me that they have given up the case as hopeless, not being willing to risk the consequences of a further exploration with the knife.

I will not weary the reader by referring to the numerous cases of this sort reported by authors, but beg to be indulged in making the following quotation from the work of Scanzoni, who, all will agree, is one of the greatest of living gynecologists!

“The absence of the womb scarcely ever exists alone, but is conjoined with malformation of the fallopian tubes, of the uterine ligaments, and of the vagina. The general development of those women in whom complete absence of the womb has been found, does not always present very sensible anomalies. With some individuals even the sexual instincts do not seem to have been diminished.”

As the above is intended for the intelligent and reading portion of the medical profession, comment is unnecessary.

May 8th, 1869.

ART. VII.—*Case of Supposed Hermaphrodism—Operation:* By SAM'L LOGAN, M. D., Professor of Surgery, N. O. School of Medicine. (Extract from the Proceedings of the Medical Association of New Orleans.)

DR. LOGAN reported a case of defective developement of the penis in the person of a child, and described an operation he performed with a view of palliating the condition. The case had been brought to him by his friend Dr. Wiendahl, who also assisted at the operation. The mother of the infant, which was about two months old, had brought it to Dr. W. for him to determine the sex, as neither she nor any of her “old women” acquaintances could do so. Upon examination it was found that a pair of well developed testicles rested, one on each side, in folds of skin which presented precisely the appearance of labia majora, the depression between the folds looking like the entrance to a vagina, but when explored it was found to be merely a sulcus lined

at the bottom with a slightly more delicate skin than that of the exposed portion. At the upper extremity of the sulcus, and directly under a projection which proved to be a rudimentary glans penis, the meatus urinarius presented itself. Above and anterior to the meatus, and extending upwards under the skin towards the symphysis pubis, an elongated rounded body could be felt, about an inch in length, continuous with the glans. The urine escapes through the groove above mentioned just as it would do in a female.

It was proposed to endeavor to unbed the penis and if possible sheathe it with skin by the following plan of procedure:

Two parallel incisions, each about two inches in length, were made at the distance of about three-quarters of an inch from the median line and parallel to the elongated body which was felt under the skin, and of course supposed correctly to be the penis. These incisions were carried carefully to a sufficient depth to unbed the organ, the integrity of the urethral canal being secured by careful dissection around a catheter passed in and held in position. In this way the operator succeeded in turning up about three-quarters of an inch of the urethra (which, however, did not reach to the extremity of the glans); and, by turning under the edges of the incision nearest to the median line and uniting them by three points of suture beneath the urethra, the extremity of the penis was ensheathed with skin, turned forwards from its bed, and a *spout* of corresponding length secured. The edges of the incision furthest from the median line were then brought together for the lower two-thirds of their extent—the upper third clasping the root of the new penis and therefore not capable of being approximated—and the whole raw surface was thus closed, and the testes and penis definitely separated.

The healing process was somewhat interfered with by a severe attack of cutaneous erysipelas, through which, however, the patient was safely conducted by Dr. Wiendahl; but now the parts have all healed over with a little module of a penis as the result.

ART. VIII.—*Some Reflections on Medical Systems, and the Constitution of Diseases*: By DR. BENJ. H. RIGGS, of Selma, Ala.

MANY years ago the great philosophical medical observer, Sydenham, announced his theory of the constitution of diseases, “Constitutio Morborum Stationaria.” He inclined to the belief that disease possessed an essential existence, and was regulated by fixed laws, as other phenomena of the creation were.

Sydenham was one of the most practical observers and original thinkers that have ever adorned the medical annals of the world. He had the understanding to perceive the necessity for, and the boldness and skill to institute and enforce, a perfect change in the system of therapeutics which he found in use in his country. He fully realized the great want of a perfect system in medicine, and saw on all sides that there was too little that was exact and positive. There had, before his day, prevailed many complex theories and novel systems, each of which had flourished in turn, had been taught in the schools, put in practical operation, and been universally received, until supplanted by its more pretentious successor, claiming to be more exact and true, but inevitably destined, like its predecessor, to be laid away to slumber in the musty books of the medical historian, or in the confused brain of the medical antiquary.

We will take a retrospective glance. When the world emerged from the chaos of the dark ages, and learning began to shed her benign rays upon the pursuits and professions of men, the system of Galen was the only one that physicians became acquainted with. It prevailed for nearly two centuries before its soundness was questioned, when the clinical system of Paracelsus reared itself in rivalry, and began to attract the attention of medical investigators. The system of Paracelsus arose about the middle of the sixteenth century. The Galenic had been prevailing since the fifteenth. These two systems had divided the medical world, until finally they coalesced upon the *discovery of the circulation of the blood*, under the influence of the great progress made in philosophy by Galileo, Lord Bacon, Des Cortes, and others, and prevailed every where under the name of humoral pathology, until the beginning of the eighteenth century. The eighteenth and nineteenth centuries have witnessed in medicine, as in all

the other arts and sciences, many rapid and sudden changes, and produced many great investigations. At the beginning of the eighteenth century, as science came to be on a more correct and improved footing, arose first the system of Stahl, which prevailed for a long time in Germany. His theory was based upon the hypothesis that the rational soul of man governed the economy of his body; and to him we are indebted for the phrase, *vis conservatrix et medicatrix naturæ*, "the art of curing by expectation, as it has been aptly termed," phrases, as embodying a rule of practice, which are capable of, and doubtless have done, much harm, but which we have to this day, however unscientific it may be, to fall back upon in treating many obscure and undecided cases of disease.

It would uselessly consume time to review all the theorists and systematizers in medicine down to the present age. Aristotle, Galen, Hippocrates, Paracelsus, Stahl, Hoffman, Boerhave, Cullen and Broussais, are names that are familiar to us all, as connected with separate systems of medical science. Thus, in our retrospect, we see change and failure stamped upon every thing; and the fact that there have been so many of these theorists implies, it seems to me, a fundamental error in the pathological systems, of the world. The world is old enough, and able minds have been investigating morbid phenomena long enough, to have attained some scientific precision, if we had been pursuing our investigations in the right direction. The want of success implies want of soundness.

As in the days of Sydenham, so, alas! it is too true in this day of enlightenment and progress, medicine is a conjectural art; necessarily so, because in the present state of medical knowledge, a positive science, which can alone give rise to positive art, is not attainable. Though we claim (and it is true) that modern medicine is far ahead of the ancient in exactness and positiveness, still we must admit that there is but little of scientific precision in it. We are wont to shun the critical gaze of the intelligent patients, and to deal in mystery, cabalistic symbols, and erroneous or unmeaning generalizations—it may be to screen our weakness and imperfections from the meridian light of an intelligent world. Nostrums are vended in the high ways and by-ways of

the land, and quackery rides in gilded coaches; while the honest physician, who relies upon the teachings of his *alma mater*, (and the reflection is due to the want of soundness in those teachings) to bring him a well-earned reputation, travels but slowly and in poor plight along the journey of life. The professional trickster who, with an acute perception of the assailable points of human nature, panders to the whims, caprices and prejudices of his patrons, becomes the popular practitioner. There is much confusion even among the leaders in medicine, and there seems to be a growing tendency to return to the old Galenic, or Aristotlian theory of humors, concoctions and blood fermentations, thus retracing our steps for centuries; and I do not know myself, but that it would do just as well to go back and begin over again on a new basis, at least as far back as the Sydenham period.

There is, in every work upon the practice of medicine, a numerous list of well-marked diseases, some of which are essentially distinct, and some seem to be allied to each other. After Cullen, most writers, imitating the Linnæan system in Botany, have attempted to arrange them in classes, orders, genera, etc., but, I must say, with imperfect success. Each one of the diseases, whether acute or chronic, has its peculiar train of symptoms which are pathognomonic, and sufficiently distinctive to enable us to diagnose it. Some have but few pathognomonic symptoms, and some have many. The aggregate symptoms are the features of the disease, and mark its constitution, or state of being. Every disease has a state of being or constitution. The *causa morbi*, acting upon the animal economy, produces certain phenomena which are characteristic of it, and denote its state of being, nature or constitution, and the *causa morbi*, we should judge, is the same now that it has been for centuries. Diseases are now to be recognised by the effects or features of the causing principle, just as they were one hundred years ago. I believe this *causa morbi* to be permanent and essentially independent of physiological functional action in the human economy, though its constitution changes under unknown circumstances at different ages. The constitution may be due to, it certainly is modified by, climate, habit of body or peculiarity of nutritive action, as in hereditary disease; or rather (and this is the view I wish to ad-

vance) to some great natural law instituted by the Creator of the universe. There are many mysterious laws and phenomena in nature, of every-day occurrence, inexplicable to a finite understanding. Who understands the mysterious laws of chrystallography, freezing, electricity, galvanism, elective affinity, the movement of the spheres, the elective action of medicinal agents, or animal life itself? Yet we all witness the action of these, and are compelled to attribute them to an inexplicable governing law.

It may be that we have pursued our investigations in the wrong direction. Probably, if the systematizers had turned their attention to the constitution of disease more, and the constitution of man less, we might have had at this day a more perfect system in medicine, and some plausibility for our pretensions to scientific accuracy. Let us not rely so much upon the physiologist, but rather turn our attention from the nerves, muscles and viscera of man to this subtile incubus itself, which seizes upon our mortal frames, "infecting all unseen" and touching us corruptibly, and bursting out into the formidable phenomena of epidemics, fevers and sporadic diseases.

Should we not, in generalizing about morbid phenomena, pursue the same course of patient research that the naturalist does in his investigations? The geologist, botanist, or zoologist endangers his life by land and flood in his travels from zone to zone, in untiring collections of facts from a world, before he begins to arrange in systems and generalize for the information of mankind, and to enable his profession to take its place among its respectable compeers, as an exact science. Why have we not had some cosmopolitan investigator in medicine? Some man of broad intellect, great learning and patient energy, who will go from region to region, observe and collect facts relating to disease, from a whole world, and among all races of mankind? Until this is done, we shall never know the nature and cause of the constitution of disease; until this is done, medicine will still be filled with inexplicable mysteries; until this is done, medicine can never be an exact science; but our systems will be ever conjectural and hypothetical, because based upon partial, incomplete and perverted data. We need experience, derived from careful, sedulous and accurate observation and experiment

in all latitudes and amongst all races of mankind, to enable us to construct an exact and universally applicable theory or system of medicine. Sydenham fully realized the importance of this want in medicine, as is evident from the following extract from his work, as republished by Benj. Rush, of Philadelphia, page xxiv, author's preface: "The improvement of physic, in my opinion, depends upon, first, collecting as genuine and natural a description or history of all diseases as can be procured; and, second, laying down a fixed and complete method of cure. It is easy enough to describe diseases unskillfully, but to write such a full and accurate history of them as to escape the censure that Lord Bacon has passed upon some great premisers in another way, is a much more difficult task."

That disease has a constitution or characteristic state of being, is, I think, evident. To admit this need not cripple investigation, but, it may be, will turn it into a new channel. Most modern stand and authors, as Watson, Wood, Williams, etc., are compelled to fall back upon this doctrine, to explain peculiarities in disease, not at present otherwise explicable. Watson speaks of "the constitution of the season;" Wood treats of the "grade of diseases;" Williams, in his "principles" uses the phrase "type of disease." These refer merely to the characteristic state of the morbid condition, and are what may be termed its constitution. The constitutional peculiarity of disease is more plainly shown in the prevalence of epidemics.

Another point which I wish to dwell upon, as possessing much practical importance, is that the constitution of disease changes. The disease itself, as is attested by its features, is the same, but its state of being is changed. Of this fact there can be no doubt in the mind of the candid observer. Our local society of late has devoted much time to discussion about the changed constitution of a malarious fever, believed to be intermittent, and known as the much dreaded hæmaturia, which has prevailed fatally for the last two or three years in this and other sections of the South.

In the language of Auteureith, a German, as translated by Dr. Graves. "All diseases, contagious and non-contagious, acute and chronic, have been observed to preserve a certain constitution or general character, which continues for a number of years in

succession, with occasional interruptions, until it is displaced by another constitution of a different character." I do not think that this point is brought forward sufficiently strong in our medical colleges or by our modern medical authors; if it be true, we should hold it in view at the beginning of every season, and determine the constitution of the season before deciding upon our plan of treatment.

During one period all diseases, we observe, are accompanied by a feeling of extreme weariness, a sudden sinking of the strength and vital powers, not preceded by any marks of previous excitement, and attended by a disposition to pass into a typhoid state. During another period diseases appear as if the digestive organs were deranged; there is diarrhoea or dysentery and furred tongue, and all the chief lesions seem to be in the bowels. During a third period diseases are characterized by a remarkable capillary activity, and we have all the phenomena of an inflammatory condition.

It seems most probable that this change of periodic constitution is gradual, and not sudden; though accidental causes, as war, famine, etc., and atmospheric changes may modify it. If the order of succession should at any time be determined, it will enable the physician to foretell the character and most appropriate treatment of future diseases. Thus medicine will be a science, on this new basis she will have arrived at her true position, and to the altitude of her noble benevolence. To do this will require great labor, spent in investigating the history of diseases in all ages and countries. We do not know that limited vivisections of dogs, cats, rabbits and birds, examinations of the dead bodies of men, or the attentive nursing and watching around the bed of the sick in narrow sections of the globe, will ever give us sound systems in medicine, or enable us as physicians and philanthropists to be such benefactors to our fellow men as we should be. The reputation and downfall of the ancient systems may be in a great measure due to the changing constitution of diseases; the constitution of diseases being changed, the old treatment was unsuccessful, and with its failure came the downfall of the system and the erection and substitution of a new one.

I will now make a hurried reference to the different constitu-

tions that have prevailed in Europe, Great Britain, and the United States during the present century thus far. We shall see from this that the general indications of treatment have undergone as marked a change as the constitutions have. During one period stimulating remedies ; next, strong purgatives, and next antiphlogistics and bleeding were found the most appropriate treatment. We find, from 1800 to 1804, that vast epidemics of a typhous character swept over Europe, nearly depopulating sections of the country by their blighting breath. Typhus fever then raged in London, Liverpool, and Ireland, and upon the Continent, at Jena, Vienna and other places. Cadiz and Seville were depopulated by yellow fever. Europe, in general, suffered from repeated visitations of what was termed influenza. An unaccountable degree of debility, with a sudden sinking of the vital power, characterized also the acute diseases of this period. Between 1804 and 1810, a new constitution prevailed, characterized by catarrhal and rheumatic affections, and fevers of an intermitting type. It seems to have been a transition state between the dying-out typhus and the more vascular diseases of later years. This, from the prevalence of furred tongue, bitter taste in the mouth, nausea, diarrhoea, etc., has been called the gastric constitution. The nervous fever at Nottingham, in 1807, the dysentery at London, in 1808, the scarlatina at Edinburgh, in 1805, and the measles at the same place in 1808, all required the purgative plan of treatment, and calomel became the favorite cathartic. How different from the epidemics which had prevailed but a few years before.

About 1812, in Great Britain and the Continent, a change was again observed to come over this constitution, and the nervous fevers were found to be accompanied both by inflammations and derangements of the digestive organs. Erysipelas affections were also frequent, and often accompanied by marked inflammatory symptoms. True, inflammatory fever was now common ; in short, an inflammatory constitution was now prevailing throughout Europe. It became necessary to use the most powerful antiphlogistic remedies ; and venesection, which had fallen into disuse during the previous constitutions, now became again the popular remedy. To bleed was so common as to be burlesqued

upon the stage, and by the humorists of [the day. Sangrado's maxim was particularly satirical: that "it was error to think that blood was [necessary for the preservation of life, one could not bleed a disease too much." It was soon believed, literally speaking, in England, that there was no disease whatever in which the lancet ought not to be used. The inflammatory constitution prevailed also, about this time and later, in the United States. Bleeding seems to have been well borne, and its use was taught at our colleges and advocated in our standard works. Many now living can recollect when it was the practice in this country to bleed, blister, sweat and purge with revulsive doses of calomel and jalap.

Thus there seems to have been prevalent three different types or constitutions of disease since 1800; each requiring a different and distinct, and sometimes opposite plan of treatment. First, we have the typhus or adynamic; 2d, the gastric; *3d, the inflammatory. So I could imagine we could have cerebral, pulmonary or renal constitutions of disease.

I think there are palpable indications of a change of constitution again at the present day, both on this continent and the continent of Europe: the inflammatory has been, or is being, supplanted by an asthenic or typhus constitution. The advocates for a supporting plan of treatment in all diseases are becoming daily more numerous, and there are but few who hold on to the old notion of phlogosis. Some, still tenacious of theory but compelled to yield to facts, recommend to adopt a do-nothing plan of treatment; to await until the disease runs its course, giving an occasional anodyne, with the view of promoting rest; while others, fully recognizing this change, early in their treatment have recourse to stimulants, tonics and nutritious aliment. In our immediate locality it is evident that venesection is no longer called for; but, instead, we are called upon to sustain the physical strength.

During the first years of the war, the epidemic measles that spread through the army, and the country also, were marked by great debility and early required stimulants. The small-pox, which prevailed as an epidemic later, was also of an asthenic constitution. The cholera, which prevailed fatally in Russia in 1865

and 1866, was also of the same grade. * * * * We have epidemics of pneumonia prevailing here, and particularly in the lime stone regions, which are so marked by vital prostration, as to receive the name of typhoid pneumonia, and which require the stimulating plan of treatment throughout. Again, our malignant fevers are marked by an unusual derangement of the organic dynamics. The intermittents of this fall (1868) I have found particularly obstinate; and we even have a new form of a dynamic fever, prevailing since 1865, called from a notion of its etiology and its marked symptoms, malarial haemorrhagic fever, which I have termed purpuræmia.

In fact, the constitution of all diseases which have been prevailing or occurring in and around Selma for several years past, has been one of debility, and required for their treatment an early resort to stimulants and careful attention to nourishment.

Finally, though our profession is uncertain in its theories and unsuccessful in its attempts at scientific systems, these to us should be but incentives to renewed efforts, for she is noble in her object; she has done much to alleviate and cure the ills of suffering humanity; and she is worthy of our most zealous and careful services. It is right that we should theorize and observe, observe constantly and tirelessly. Experience, in the present state of our profession, derived from careful, sedulous and accurate observation and experiment, is the safest source of practical knowledge, and the best test of all theories. Theories are essential to this observation, and to the best use of a matured experience. Experience, without theories, empiricism, and is opposed to exactness and professional progress. Accurate observation is moreover the key to individual professional success. We must be ever watchful, and go to our patients with no previously mapped-out plan of treatment. Let us, each season, determine the constitution of that season, before we venture to treat diseases, even observing attentively, and theorizing cautiously, remembering if we fail of success in practice, that such failure is not a charge against the art of prescribing, but rather against our correct use of that art. We should never flag in our zeal or our devotion to progress; but "still achieving, still pursuing, learn to labor and wait," until our noble profession arises to the altitude of an exact art.

ART IX.—*A Case of successful Ligature of the Innominate Artery:* By ANDREW W. SMYTH, House Surgeon, Charity Hospital, New Orleans.

THE following Correspondence explains the necessity of republishing Dr. Smyth's operation, a full report of which appeared in the New Orleans Medical Record, of May, 1866:—EDS.

NEW ORLEANS May 12, 1869.

DR. A. W. SMYTH,

Dear Doctor—At one of the meetings of the Surgical Section of the American Medical Association, an earnest desire was unanimously expressed for full details concerning your case of successful ligature of the innominate, and I promised to try and procure a paper from you, embodying the same, with such observations as you deem appropriate on the subject, and publish it in the next issue of our Journal. Will you oblige me and the Profession at large, by letting us have such a paper.

Very truly yours,

SAM'L LOGAN.

DR. S. LOGAN,

In accordance with your request, and the expressed wish of the members of the Surgical Section of the American Medical Association for a report of the details concerning the case of successful ligature of the innominate artery, I enclose you the following condensed statement, which I believe embraces all the important features connected with the case.

Respectfully your ob't servant,

A. W. SMYTH.

The subject of the operation, William Banks, aged 32 years, was admitted into the Charity Hospital on the 9th of May, 1864, suffering from aneurism of the right subclavian artery.

The tumor, situated in the posterior inferior triangle of the neck, had reached the size of a small orange, and was four months in forming. The patient believed that the tumor originated from a strain which his arm received in the month of February, as shortly after that time it made its appearance.

On the 15th of May, assisted by Dr. D. L. Rogers, of New York, Drs. Holliday and Boyer of this city, and Surgeons Bacon and Orten, of the United States Army, I placed a ligature on the innominate artery, a quarter of an inch below its bifurcation, and another on the carotid, an inch above its origin.

Immediately after the operation, the temperature of the arm

became increased and except slight fever, no other disturbance was noticed.

In forty-eight hours a very slight pulsation was discovered in the arteries at the wrist.

On the 28th of May, the ligature came away from the carotid artery, and on the 29th, fourteen days from the time of operating, a severe haemorrhage occurred, causing syncope and ceasing of its own accord; about sixteen ounces of blood was supposed to have been lost.

Slight haemorrhage took place on the two following days, and on the 1st of June, I filled the wound with fine shot,* thinking that the pressure of the shot on the artery would aid in effecting its occlusion, and at the same time arrest the haemorrhage.

On the same day, after the introduction of the shot, the ligature came away, by slight pulling, from the innominate artery.

On the 17th of June a portion of the shot were taken out, when haemorrhage returned a few hours after, and the shot were immediately replaced.

Slight bleeding however occurred at intervals of two and fifteen days, and on the night of July 5th, a terrific haemorrhage took place, exceeding in quantity the first on the 29th of May. The bleeding ceased, as in the first instance, from syncope.†

Believing the haemorrhage to come from the distal side of the ligature, and from the subclavian artery, the carotid having been tied, I determined on July 8th to ligature the right vertebral artery, this being the principal branch carrying a retrograde current into the subclavian.‡

As the operation of ligating the vertebral artery is one of some difficulty, I will give the exact procedure, from my original report.

The head of the patient being thrown back and slightly turned

* Sold in stores as No. 9.

† It was the occurrence of syncope and the consequent arrest of haemorrhage that first directed my attention to the vertebral artery as being the one from which the bleeding took place. This artery is capable of draining the blood directly from the brain, therefore the one most likely to produce these effects, and a repetition of haemorrhage had been a striking feature in almost all the cases operated upon.

‡ See drawing of internal carotid and vertebral arteries Gray's Anatomy, page 333, Am. edition.

to the left, an incision two inches in length was made along the posterior border of the sterno-mastoid muscle, commencing at the point where the external jugular vein crosses this muscle and terminating a little above the clavicle, the edge of the muscle being exposed and drawn to the inner side, the prominent anterior tubercle of the transverse process of the sixth cervical vertebra was readily felt and taken for a guide. Immediately below this and in a vertical line with it lies the artery. A layer of fascia was now divided, some loose cellular tissue with lymphatics, and the ascending cervical artery were pulled to the inner side, and a separation was made between the scalenus anticus and longus colli muscles just below their insertion into the tubercle, when the artery and vein became visible; the latter was drawn to the outer side (this is important), and the needle passed around the former from without inwards.

On the morning of July 9th, thirty-eight days after their insertion, all of the shot were removed with a pair of dressing forceps from the first wound; the shot were found to weigh two and a half ounces.

A marked decrease in the circulation of the arm was now apparent, the slight pulsation at the wrist disappearing; coldness and oedema supervened, and the brachial artery became occluded, feeling corded throughout its whole extent. I felt somewhat alarmed for the safety of the limb, but in a few days these unfavorable symptoms began to subside.

No further haemorrhage took place after the second operation. The ligature came away on the tenth day, and the wounds soon healed. On the 15th of September, the patient felt entirely well, with the exception of weakness in his right arm, the use of which he was rapidly regaining. The aneurismal sac had almost disappeared.

At the present time, May 15th, 1869, five years from the date of the operation, the patient is enjoying the best of health, having gained nearly twenty pounds in weight during the last two years.* He has the full use of the right hand, although the arm is not quite so muscular as the left, and in every way the cure is complete and perfect.

* On May 6th, 1869, the patient was exhibited before the American Medical Association at its annual meeting in New Orleans.

At the time of writing the original report, September 15th, 1864, I was of the opinion that secondary haemorrhage would be prevented in future operations by ligation of the vertebral artery at the same time as that of the innominate and carotid arteries. In this, however, I was, without doubt, mistaken.

In May, 1866, Dr. M. M. Dowler, of this city, in the first number of the New Orleans Medical Record, published a report on the present condition of William Banks. He had been seen by Dr. Dowler, a few days before coming to the hospital, and knowing the result of the previous operations for the cure of subclavian aneurism, the Doctor became interested on learning that at last, and on a patient that he happened to know the innominate artery had been successfully tied.

To this circumstance I am indebted for a highly complimentary letter from Dr. Dowler, which is published with the report congratulating me on the success of the operation. In this letter the following observation is made: "The success of your operation was clearly owing to your happy resolution in relation to tying the vertebral artery. But it appears to me in reflecting on your case, that there is coupled with this, another element to be accredited to your success; and that is *your having tied it at the time you did, rather than at the time of the first operation.*"

I am convinced now that the interval between the operations was an important element in the success, and I am free to acknowledge that I was not the first to perceive it. I still think, however, that the interval between the operations need not be longer than the time required for the separation of the ligature from the innominate artery, say fifteen days, and with care, compression would prevent a fatal haemorrhage for at least this period.

I mentioned in my original report that the common carotid artery was found occluded after ligation of the innominate. This is reported in several of the fatal cases, and that I believed this occlusion resulted from the stronger retrograde current in the vertebral opposing that from the carotid, for these currents oppose each other in the subclavian when carrying on the retrograde circulation. If the anastomosis of the common

carotid is not sufficient to carry a retrograde current into the subclavian after ligature of the innominate, it is highly probable that other communicating branches of the subclavian also fail to do so, and for the same reason.

It is a mistake to suppose that all the branches communicating with the distal end of a ligated artery enlarge and carry on a retrograde circulation. The retrograde currents through these branches if we examine their direction carefully, will be found to oppose each other, and the stronger from a more direct source, arrests the weaker current, and not being sufficient to reverse it, occlusion of the branches carrying the weaker current is the result. For this reason, during the fifty-four days that intervened between the two operations in the present case, the current from the vertebral artery must have occluded, probably, all of the other communicating branches of the subclavian, and accounts for the fact that the brachial artery became occluded after the ligation of the vertebral. The axillary and subclavian are no doubt also occluded, and impervious, for no evidence of circulation through them is to be found on examination at the present time.*

* To understand the cure of aneurism by compression, we must take into consideration the action of the collateral circulation. We know that in the use of compression a complete arrest of the circulation at the point compressed is not required to effect consolidation of the tumor, and it is believed that consolidation will take place by simply diminishing the flow of blood through the aneurism. In reality, however, the slight compression is capable of causing a complete arrest of circulation; owing to the collateral circulation forcing a retrograde current against the direct into the artery beyond the aneurism. When the retrograde current beyond the aneurism equals the obstructed direct current consolidation takes place; this explains why, in some instances, the pulsation in the tumor continuing after ligation, soon ceases of itself; the reason is that the increasing collateral circulation arrests the direct. Could we increase the collateral without obstructing the direct at all the same result would follow.

In the use of compression, therefore, our aim should always be to throw the retrograde collateral circulation beyond the aneurism; when this is not done we often fail in effecting a cure. For instance; in popliteal aneurism compressing the external iliac forces the retrograde current by the profunda through the aneurism, and in consequence of this we do not often succeed. If we made compression beyond the profunda the collateral circulation would then assist us, and success would be more certain. If an aneurism is so situated that compression can be made on the distal side—before the artery reaches the principal branch carrying the retrograde collateral circulation—occlusion will as certainly result as if the compression was made on the cardiac side. The truth is that compression increases the collateral circulation and the collateral circulation effects the cure. In instances in which slight compression for a short time has succeeded in effecting a cure, the

The longer therefore that the principal communicating branch with the distal end of a ligated artery is allowed to carry on a retrograde current the more certain will all pressure of blood in the distal artery be removed by the ligation of that branch, and consequently the interval of time between the operations becomes of very great importance.

The ligation of the principal communicating branch with the distal end of a ligated artery, to arrest secondary haemorrhage from it, is an entirely new operation (the present instance of ligation of the vertebral being no doubt the first), and it is one of some value to general surgery.

CLINICAL MEMORANDA.

FROM CASES TREATED IN THE CHARITY HOSPITAL, AND BROUGHT BEFORE THE MEDICAL CLASS, UNIVERSITY OF LOUISIANA, SESSION OF 1868-9.

Outline of Clinical Lecture, delivered at the Charity Hospital; By JOSEPH JONES, M. D., Professor of Chemistry in the Medical Department of the University of Louisiana, New Orleans. (Reported for the New Orleans Journal of Medicine.)

HEART CLOT.

DR. JOSEPH JONES exhibited to the Class assembled in the Amphitheatre, the viscera of a patient who had died suddenly from the effects of a fibrinous clot, formed in the heart, during life, whilst the patient appeared to be in his usual health.

The following is an outline of this interesting case:

Thomas L., native of Ireland, aged thirty years, laborer; during the past two years has been employed upon the railroads in Southern Texas, and at that time suffered with several attacks of malarial fever. Returned to New Orleans in August, 1868, and at this time was suffering with chill and fever. Entered Charity Hospital Ward No. 16, in the following month (October), and remained under treatment for the effects of chronic malarial

collateral circulation from obstruction in the aneurism was pretty well established and but little more assistance was required.

A knowledge of these facts, when well understood, will, I am sure, guide us materially in the use of compression.

poisoning, until the 28th of November, when he was discharged. During this period no disease of the heart was noticed, or suspected. Commenced work in a stable, but after a short period was attacked with diarrhoea, which compelled him to cease labor. The diarrhoea, however, appeared to be light, as the patient treated himself and did not call in medical aid.

The diarrhoea was checked, and the patient was about to resume his labor, when he was seized on the 21st January with what he called a "chill," attended with difficulty of breathing. After a time the difficulty of breathing disappeared, and the patient, who was not confined to his bed, appeared to be relieved; but on the night of the 25th, was again attacked with "chill," attended with great embarrassment of respiration. Entered the Charity Hospital the next day, January 26th, 1869, bed No. 409. When seen at night, just after his admission, the respiration was hurried and embarrassed, and the lungs appeared to be greatly congested; the pulse was rapid and irregular, the action of the heart irregular and rapid, and the face dark from venous congestion.

The next morning, January 27th, Dr. Joseph Jones made a careful examination of the patient, and diagnosed the existence of a fibrinous clot in the right side of the heart, and referred the congestion of the lungs, and of the venous system to the existence of the obstruction in the circulatory apparatus. The opinion was also expressed that the case was hopeless, that drugs would excite but little effect upon its progress, and that the patient would die suddenly.

The patient was a stout, muscular man, with full, well developed limbs, and large capacious chest. The effects of malaria were strongly marked in his sallow, anaemic hue. Percussion revealed great congestion of the lungs, and some enlargement of the liver and spleen. The heaving, panting respiration, as the patient tossed from side to side, and incessantly changed his position, in his gaspings and struggles for breath, did not yield the characteristic symptoms of pneumonia, when the ear was applied to the walls of the thorax.

The peculiar and distressing dyspnoea was not caused by a check of respiration, for the respiratory murmur was audible

enough, but by the arrest of the current of the blood in the lungs.

The dyspnœa evidently depended upon the imperfect circulation of the blood through the lungs, the damming back of the blood in the venous system, and the imperfect supply of oxygenated (arterial) blood to the lungs, muscles and nervous centres. The left side of the heart being imperfectly supplied with blood, the arterial circulation is weakened ; the pulse is small and intermittent, and the surface of the body cold, or more correctly, the animal temperature was depressed from the diminished supply of oxygen. At the same time the arrest of the circulation in the right or venous heart causes stagnation of the blood in the venous circuit, and this together with the imperfect oxidization was manifested in the purple, almost black hue of the lips, extremities and cheeks.

To the diminished supply of arterial blood, to the muscles and great nervous centers, must be referred the general muscular prostration, and the continued restless motions. The cerebro-spinal system being imperfectly supplied with blood, the control and co-ordination of the muscles are to a great degree lost, and the phenomena resemble closely the convulsive movements during fatal and prolonged hæmorrhage.

The action of the heart was tumultuous, irregular and thumping, and the sounds of the right auriculo-ventricular valve and of the pulmonary semi-lunar valves, were muffled and suppressed by the fibrinous concretion.

A blister over the region of the heart, and fifteen drops of the tincture of wild jessamine (*Gelsemium sempervirens*) were ordered. No rational grounds of hope, however, were entertained as to the benefit of these or any other remedial measures.

The patient continued to grow worse ; the dyspnœa increased ; the action of the heart became more tumultuous and irregular ; the restlessness was progressively aggravated ; the patient could obtain no rest, night or day ; was compelled to maintain the sitting posture, and tossed his arms about and heaved his chest, and incessantly groaned and called for "more breath."

If the patient assumed the recumbent posture the face became almost black from the congestion, and the struggles for breath were fearful. The patient, however, retained some ap-

tite for food, and was able to stand up, and even to walk a little.

On the 28th, after eating his dinner, at 1 o'clock P. M., the patient got up from his bed, walked a few steps and fell dead.

The autopsy was performed early the next morning.

The trunk and limbs were round and full and the muscles well developed.

The lungs were congested with blood, but still they floated upon water; there was no softening of the pulmonary tissue, and no marks of pneumonic or pleuritic inflammation were discovered.

A large, dense, light, yellow, firm, irregularly shaped fibrinous clot was found, firmly attached to the carnaeæ columnæ, and chordæ tendineæ of the right ventricle, and extending through the auriculo-ventricular opening; it was attached to the valves, and sent off branches which were firmly adherent to the muscular columns of the right auricle, and finally it sent off a long, ribbon-like, cylindrical concretion through the pulmonary artery, which divided and subdivided and followed the course, or rather the interior cavities of the pulmonary arteries, in their larger ramifications through the lungs. Dr. Jones held up the entire heart and lungs by the attachment of the clot to the muscular columns of the heart and cords of the valves.

The clot was composed of distinct fibrinous laminae, which could be peeled off, layer after layer, and throughout its entire structure was free from colored blood corpuscles. (The clot was placed in alcohol and deposited in the Museum of the Medical Department of the University of Louisiana.)

The left side of the heart was filled with dark fluid blood, but contained no fibrinous concretions. Nothing worthy of note was observed in the alimentary canal. The spleen presented a slate color upon the exterior, was somewhat enlarged, and contained haematin, and disintegrated blood-corpuscles. It was also softer, and contained dark splenic mud in greater proportion than is usual in the spleens of those who have not been subjected to the action of malaria.

The liver presented a slate color upon the exterior, and a light bronze color in the interior.

The changes of the spleen and liver, appeared to have been of long standing, and appeared to have resulted from the previous action of the malarial poison.

Death, therefore, resulted in this case, undoubtedly from the formation of a fibrinous concretion in the right side of the heart.

The first attachments of the fibrinous deposition, appeared to have been with and around the muscular columns, and valvular cords of the right auricle and ventricle, much after the manner in which fibrin is accumulated around the branches of twigs, in the process of whipping the blood after its abstraction from the living animal by bleeding; and the clot after its first formation, grew by slow accretions, layer after layer, of fibrin being deposited, and the entire clot enlarging most in the direction of the current of the blood, and gradually making its way, by slow depositions, up along the pulmonary artery and its branches.

As this case came under observation, only after the formation of the fibrinous concretion, within the cavities of the right side of the heart, it is impossible to determine to what extent this result was brought about by the action of malaria.

The previous history of the case, as well as the results of post-mortem examination of the liver and spleen, render it evident, that this agent could not be excluded in the discussion of the probable causes of this sudden, distressing and rapidly fatal accident. No lesion of the heart or circulatory apparatus was found, which could in any manner explain the deposition of the fibrinous element of the blood, and the explanation must be sought elsewhere.

It has been recognized by some pathologists, that certain symptoms and stages of acute inflammatory diseases, are attended with some risk of fibrinous deposition. The deposition of fibrin is materially favored by the pre-existence of disease of the heart, either acute or chronic, as has been demonstrated upon more than one occasion, to the students of the University, during the present season. And in the records of medical cases will be found illustrations of the mode in which dilatation of the heart, feebleness of its walls, and thickening and roughening of its valves, favors the formation of fibrinous concretions, especially when the circulation is sluggish, and the nervous and muscular forces depressed.

As all acute, sthenic inflammations (pneumonia foremost of all), form favorable pre-existing conditions for the formation of heart

clots, great light would undoubtedly have been thrown upon this case, if the first symptoms of this diseased state had been carefully and accurately investigated and recorded.

Malaria, by its effects in inducing sudden congestions, by its depression of the heart, and of the general and capillary circulations, and by its potent action on both the sympathetic and cerebro spinal systems of nerves, tends to promote the formation of heart clots, although there is an actual diminution of the fibrin in the blood during malarial fever.

As early as 1790, Dr. Chisholm in his "*Essay on the Malignant Pestilential Fever, introduced into the West Indian Islands from Boullam, on the coast of Guinea, as it appeared in 1793, 1794, 1795, and 1796,*" describes a form of malarial fever, in which there was a most marked tendency to the deposition in the blood-vessels of the fibrinous element of the blood.

Dr. Chisholm even entitles the fever as "The Epidemic Polypus," at Grenada, in 1790.

Dr. Chisholm described the town of Grenada as peculiarly situated. In the foreground lay the sea, perfectly open, with the extensive and burning beach of sand; on the left a hill of considerable and steep ascent, the base sides of which, in conjunction with the reflecting surface of the sea, produce in dry seasons an immense degree of heat. On the right the view was limited by a mountain of great height and magnitude; in the background a marsh extended from the sea to the mountains, and formed chiefly by water rushing from a narrow stony ravine, and dammed up by a beach rendered impenetrable by the surge; from this marsh vapors of a very deleterious nature continually exhaled; and this was particularly observable in the month of October of the year 1790, in which the "epidemic polypus" prevailed, on account of the trees and brush wood which had hitherto covered it being cut away in order to drain the marsh.

Immediately behind the marsh the ravine begins and runs back between the hill and mountain in the form of a funnel, gradually rising for upwards of a mile.

The negro houses of the plantation were built on the left, chiefly on its slope, and towards the edge of the marsh. The negroes were consequently at once exposed to excessive heat, a

cold chilling current of air and the miasm of the marsh. Their diet was chiefly composed of vegetable food. They had been exposed immediately before the appearance of the disease in question in cleaning the surface of the marsh, and in hoeing land for the reception of cane plants. Like all other negroes placed in similar situations (marshy), they were much given to the destructive habit of eating a species of pipe-clay, very abundant in Grenada.

Dr. Chisholm describes the disease as making its appearance in the plantation of Grand-mal, about the end of September or beginning of October; was most prevalent towards the close of the latter months and disappeared totally in November. The whole number of sick was about fifty, of whom seven died; that is nearly one-fifth of the sick died.

The disease in its commencement was marked by no distinguishing symptom; but soon after the patient complained of pain at the pit of the stomach and in the head, and difficult respiration. These pains were attended with a dry skin, small quick pulse and slight frequent dry cough. No febrile heat accompanied these symptoms; on the contrary, the surface was at this period remarkably cool; but a heaviness and dullness of the eye, a melancholy depression of spirits and features strongly expressive of anxiety were constant attendants.

The state of the patient was thus characterized for three days. At the expiration of that period the pulse became extremely quick, 120 to 140, and intermittent, attended with a penetrating pungent heat, which produced a pricking sensation in the hand of the person feeling the pulse. But this state of the pulse and heat, as well as the pains, anxiety and other distressing symptoms, now also intermitted, or rather the disease assumed something like an intermittent form, the intermission, if it may be so called, continuing eight or nine hours. During the paroxysm the struggle for breath, the aggravation of all the other symptoms and the very quick, interrupted, and evidently visible as well as audible palpitation of the heart, produced a sense of uncommon horror. The paroxysm was succeeded by a cold clammy sweat and a state of approaching syncope. The second paroxysm generally put a period to the existence of the patient. The

disease was also distinguished during this latter stage, and even for some time previous to its commencement, by a constant, or almost constant disagreeable clammy sweat, overspreading the face, the upper extremities of the body, as low down as the scorbiculus cordis, all below remaining arid and parched in a most remarkable degree.

The disease seemed sometimes inclined to terminate by metastasis; one instance of this was remarkable, wherein a spontaneous absorption of the lymph deposited in the heart, and a deposition of it in the left arm and left thigh took place. The patient, in this case, after laboring under all the symptoms peculiar to the disease, before the intermittent period, found himself all at once, and without an evident cause, relieved of them; but he perceived at the same instant an excruciating pain, a little above the elbow, and nearly about the middle of the thigh. He continued ever after absolutely free of all the symptoms of the polypus but they were succeeded by a large abscess in the parts in which he felt the pain. That in the arm disappeared gradually, but the other became so large, as to occupy the whole of the under the part of the thigh. The cure was effected, by passing a seton through the the whole length of the tumor; by the use of two dozen of Madeira wine, a large quantity of bark, and a calomel pill, with opium, three times a day. The audibleness of palpitation may be considered as exaggeration; but in one instance particularly, the gentleman (Mr. McSween) to whom the negroes belonged, heard distinctly the palpitation, although in an adjoining room.

Having no suspicion of the heart being the seat of this uncommon malady, Dr. Chisholm, did not examine that organ in the the two first bodies he opened; but finding all the other viscera, and the brain in a state of health, he found himself unable to account for the extraordinary symptoms the patients had been afflicted with; until on opening the third body, he examined the heart, and discovered what he considered to be the cause of the seat of the disease.

In the right ventricle of the heart, Dr. Chisholm found a polypus, which extended considerably into the pulmonary artery. On extracting it, it measured exactly two feet and two inches in

length, and the body contained, in the ventricle, two inches in breadth.

In the fourth body, there was a very large polypus in the right and left ventricle, besides one in the right auricle. The hearts of the fifth, sixth and seventh, were circumstanced precisely similar; and in the five, except one where the lungs was morbidly affected, no other morbid appearance of any description could be perceived.

Dr. Chisholm concluded that these extraordinary circumstances justified the appellation—“*Epidemic Polypus.*”

As to the treatment, the moment Dr. Chisholm could distinguish the disease, he bled, in order to render circulation through the lungs and heart less difficult and obstructed. This evacuation was never repeated without great caution, and the most evident necessity. After this he gave calomel in doses of five grains, guarded with opium, every fourth hour, and continued until salivation was excited.

Under this treatment, Dr. Chisholm affirmed that he lost not a single patient, the fatal termination having taken place before he could carry it fully into execution.

Dr. Jones, has himself observed, carefully noted, and recorded a number of cases of malarial fever, in which *heart-clots* were formed before death, and he illustrated this important subject by the following cases investigated by himself:

In the latter part of September, 1867, an Irish laborer, who had suffered from a severe attack of bilious remittent fever, contracted in the low malarious rice lands around Savannah, Georgia, and who although feeble was convalescent, was suddenly seized during a cold change in the weather, with difficulty of respiration, loss of muscular and nervous force and complete prostration.

The lungs were greatly congested, the respiration spasmodic and embarrassed; the patient lay upon his bed without power to turn upon either side; the surface of the trunk and extremities felt cold; the expression of his eyes and countenance, and his efforts to converse, showed that the patient was intelligent, but he was entirely unable to articulate or expectorate. Sinapisms, diffusible stimulants and quinine, although administered freely, did not produce any beneficial effects—they failed to arouse the

circulation, and did not increase the animal temperature, because the supply of oxygen necessary for the chemical changes which generate the physical, muscular and nervous forces, was cut off. The mustard scarcely reddened the skin, even after the application of several hours.

The patient gradually sank and died in thirteen hours after this sudden and remarkable change.

The autopsy performed eight hours after death, revealed the following points :

The body was in good condition and not emaciated, with full and round limbs, covered by a thick layer of fat. The structures of the brain and spinal cord, presented the usual consistence and appearance.

The heart was normal in size and structure. The right ventricle contained a light-yellow, large fibrinous clot, attached to the chordæ tendineæ, and carneæ columnæ, and extending through the auriculo-ventricular opening into the auricle.

This clot was firm in texture, and weighed one ounce.

The left ventricle contained a small light-yellow clot; the aorta also contained a small, flattened ribbon-like, light yellow clot. These clots were evidently formed previously to death.

The lungs were greatly inflated, and did not collapse in the slightest degree, when air was admitted into the pleura. These organs were congested with blood, and resembled in appearance liver, and when handled they were remarkably heavy, and felt more like liver than lungs. When cut, the air cells and large and small branches of the bronchial tubes, were found filled with serous fluid, and numerous bubbles of air. When the lungs were squeezed, pints of this serous fluid flowed out. In many portions of the lungs, the serous fluid was clear; in others it was reddish. The fluid resembled serum in all respects, and was not mucus.

Alimentary canal presented a healthy appearance.

The liver and spleen exhibited the characteristic effects of the action of the malarial poison. Both these organs appeared to be recovering from the effects of the malarial fever.

In a second case, observed in the same locality, and about the same time, the patient, a tall Irishman, aged 30 years, of irregu-

lar habits, and greatly exposed to the action of the malaria, along the banks of the river, after suffering near three weeks with malarial fever, suddenly grew worse, with a feeble, rapid pulse, 160 per minute, and spasmodic, labored respiration and wandering intellect.

The forces progressively failed, and the patient died in about ten days after the manifestation of the disagreeable symptoms.

The cerebro-spinal system presented no recognizable lesions. The spleen and liver exhibited the characteristic lesion of malarial fever. The lungs resembled the congested state described in the preceding case, with the addition of recently formed plastic lymph upon portions of the pleura. During the last attack the patient had complained of some pain in his side.

All the cavities of the heart contained golden-colored clots.

The right auricle had a large golden-colored clot, which was attached to the carneæ columnæ, and chordæ tendineæ of the auriculo-ventricular valves. The aorta, carotids and pulmonary arteries contained elongated, golden-colored clots, having diameters nearly equal to those of the auricles. All these clots were firm and elastic.

As far as the observations of Dr. Jones extend, *formation of heart-clots during life, is very common in malarial fever.* +

In fifteen post-mortem examinations, he found heart-clots in ten cases, and of the remaining five, one was a case of typhoid fever, combined with remittent fever, another was a case of malarial fever of long standing, where the patient died of exhaustion, and in the remaining three, no special examination for heart-clots was instituted.

The following cases, in addition to the two just reported, will illustrate the symptoms attending the formation and existence of these heart-clots.

Fatal case of congestive fever, terminating suddenly. *Fibrous concretions in the heart and pulmonary blood-vessels and aorta.* Irish laborer; height five feet ten inches, weight, one hundred and fifty pounds; black hair, black eyes, dark complexion, resembles an Arab in appearance.

September 2, 1857, twelve o'clock, M., has been sick, at the Bay, for ten days, with an abscess in the palm of the hand; pre-

vious to this, he had been working on the banks of the Savannah River. When first brought (this morning) into the hospital he appeared stupid, and urinated in the bed. After the administration of a hot-bath, and the lancing of his hand, he was aroused, and now appears to be entirely restored to the exercise of his intellect. Seems to be very weak and complains of no pain or trouble anywhere, except in the palm of the hand. Skin not warmer than usual ; tongue, dry, red and glazed, and harsh and rough to the touch ; pulse 82.

Continued sensible, and apparently convalescent, and complained of nothing, and manifested no striking phenomena until September 3, at half-past three o'clock, P. M.

At this time I was summoned hastily, and found the patient insensible, with his mouth open, and groaning loudly at every breath. His groans sounded very much like the barking of a dog.

Countenance distressed, anxious and expressive of great agony, tendons twitching violently ; teeth coated with sordes ; tongue dry, red and glazed, and harsh to the feeling. Respiration 40, thoracic and panting ; pulse 104 ; temperature of the hand 103° F. ; skin hot, dry and rough. When the attempt is made to arouse him, by violent shaking and loud talking, he matters incoherently. Great tenderness upon pressure of epigastrium ; cries out whenever this region is pressed. Cups to the temples and back of neck, a large blister over the epigastric region—sinapisms to the extremities, stimulants, and sulphate of quinia, all failed to arouse this patient, and he died twenty-four hours after this observation.

There was but little change in the symptoms, with the exception of an increase in the frequency of the respiration and pulse.

Autopsy three hours after death : Head.—When the skull-cap was removed, the dura-mater presented the usual appearance. Serous effusion had taken place between the dura-mater and the membranes, and the surface of the brain ; and there had been an effusion of golden-colored serum between the arachnoid and pia-mater. Blood-vessels of pia-mater filled with blood. Blood-vessels at the base of the brain, and upon the medulla oblongata and spinal cord more engorged with blood than those upon the

superior portion of the brain. This appeared to be due to the effects of gravity. The substance of the brain possessed the usual consistence, and appeared to the naked eye to be normal in structure.

Chest.—Lungs normal; trachea filled with froth.

Heart.—Normal. The right auricle contained a large golden-colored clot, which filled almost the entire cavity. The left auricle contained several small yellow clots. The right ventricle contained several small clots of blood, which resembled in all respects coagulated blood.

The main trunk of the pulmonary arteries contained a long, flattened, ribbon-like, yellow clot, which extended not only through the large trunk, but divided and sent off branches to each branch of the pulmonary artery; and then again subdivided and sent branches off to the minor branches of the arteries. When the main clot in the pulmonary artery was gently pulled, the branches were drawn out, twelve inches in length, and at their extremities were not much larger than a fine silk thread. The clot was almost entirely free from red corpuscles, of a yellow color, firm and elastic in structure, and in appearance resembled an organized product.

A similar ribbon-like, yellow, elastic clot, extended through the whole length of the aorta. The blood in the vena-cava was coagulated, but the coagulum was like that of ordinary blood, and much less firm than the clots of the right auricle, pulmonary arteries and aorta.

Abdominal cavity.—The liver presented the true malarial hue; contained no grape sugar, but an abundance of hepatic starch; and its blood did not change to the arterial hue when exposed to the atmosphere. The spleen was enlarged, softened, and of the slate color of malarial fever.

Stomach, intestines and kidneys normal.

The autopsy demonstrated this to be a case of malarial fever.

Case of congestive fever illustrating the formation of fibrinous coagula in the heart and blood vessels.

Irish seaman, aged 24: light hair; light blue eyes; fair complexion; height five feet seven inches; stout; well built; weight one hundred and fifty pounds.

October 12th, 1857, 12 o'clock m. Entered the hospital two hours ago. Now he is out of his head, and can give no history of his case. A companion states that he has been watching at night on board a brig, lying in the river, below the ship-yard, along the low marshy shore of the Savannah river, and that he was taken sick with chill and fever one week ago, but did not until two nights ago discontinue watching at night. Habits intemperate.

Pulse 137, rapid and feeble; respiration 32; skin hot and dry. Tip of tongue clean, and of a bright red color—the remaining portion of the tongue is coated with yellow fur. The tongue is dry and harsh to the touch, and feels, when the fingers are passed over it, like sand-paper. The patient mutters to himself continually half-formed sentences and imperfect words. Continues to mutter in the same incoherent manner, notwithstanding strenuous efforts to arouse and attract his attention. About one hour ago his extremities felt cooler, and his pulse was more feeble than it is now; mustards were applied to the extremities—they increased the temperature and rendered the pulse somewhat fuller, and aroused his intellect for a moment, but he again relapsed into the state of delirium.

Mustards to the epigastrium and extremities, cut cups to the temples and back of neck, stimulants and sulphate of quinia and purgatives failed to arouse the intellect, and at 8 o'clock p. m. the patient lay in a profound stupor, with full rapid respiration and full rapid pulse. Pulse 124, and has increased in force and volume under the action of the stimulants and sulphate of quinia. Skin hot and dry; tongue presents the same dry and rough appearance. R.—Continue the stimulants and sulphate of quinia, and apply blisters to the back of the neck and over epigastric region.

13th, 11 o'clock A. M. The cut cups to the head, the sinapisms upon the extremities, the blisters upon the back of the neck and epigastric region, and the diffusible stimulants and cathartic have failed to arouse this patient, and he now lies in a comatose state, and passes his urine and faeces in bed. The nurse states that during the night he was much more restless than at present, and it was necessary to give constant attention that he did not fall out of bed. The medicine operated freely, and the blister

has drawn well. The serum from the blistered surface is of a golden color.

Respiration thirty, stertorous. The patient lies in a stupor, with his eyes shut and mouth open, and emits a suppressed groan, or whine, at every breath ; his appearance, and the sounds which he emits, are similar to those of the patient described in the preceding case. These groans appear to be entirely involuntary, and depend upon the state of the organ of voice, and the mode in which the air passes through it.

Pulse 144, feeble ; the sounds of the heart cannot be distinguished—they are both united into one, and the heart makes a short, quick, thumping sound ; the number of the thumps of the heart correspond to the pulse, 144 to the minute : temperature of atmosphere, 77° F. ; temperature of hand, 103.5 ; skin hot and dry ; teeth coated with sordes ; cannot get a sight of his tongue, as his teeth are tightly closed, and he is entirely insensible.

I have just applied mustards to his extremities : they do not arouse him ; after remaining on one hour they scarcely redden the surface.

9 P. M. Profound coma ; respiration thirty, low, spasmody ; pulse is gone ; heart merely flutters ; head and trunk warm ; extremities cold ; have again applied mustards to the extremities but they do not produce the slightest effect, and he will die in the course of one hour.

The patient died half an hour after this observation.

Autopsy twelve hours after death : Body in good condition, apparently not at all reduced ; limbs full and round, muscular, well developed ; complexion fair, with a slight tinge of yellow ; skin of the dependent portions slightly darker than that of the superior portions of the body ; rigor-mortis, remarkably strong.

Head.—*Dura-mater* normal in appearance ; the longitudinal sinuses of the dura-mater contained an elongated, flattened, ribbon-like fibrinous clot, which was free from colored corpuscles, and of a yellow color. This, without doubt, was formed before death. The substance of the brain appeared to be normal in color and texture.

Chest.—Exterior surface of the heart adherent at all points to the pericardium. There was no free space between the heart and the pericardium, hence no fluid lubricated the heart. If this lesion

was the result of inflammation, it is certain that the inflammation had nothing whatever to do with the present attack of fever. Muscles of the heart paler than usual. *The right auricle, and ventricle contained a yellow clot, free from colored blood corpuscles, which was attached to the columnæ carneæ and chordæ tendineæ of the right ventricle, and extended through the auriculo-ventricular opening into the auricle.* This clot sent off a large branch into the pulmonary artery. This branch of the yellow fibrinous clot, which almost completely filled up the pulmonary artery subsided and sent branches down the right and left pulmonary arteries, and these branches again divided and sub-divided into numerous branches, *the smallest of which were not larger than fine thread.* These fibrinous threads passed deep into the blood vessels of the lungs, probably almost to the commencement of the capillaries. *The left ventricle contained a similar yellow fibrinous formation almost entirely free from colored blood-corpuscles which was attached at one extremity to the columnæ carnæ, and chordæ tendineæ, and extending through the auriculo-ventricular opening into the auricle, subdivided into branches, which passed up the pulmonary veins, and subdivided into numerous smaller branches, which occupied the smaller divisions of the pulmonary veins.* These fibrinous bodies of the pulmonary veins and arteries were very elastic—with care they could be drawn out of the smaller branches of the pulmonary veins and arteries, four and six inches in length, without breaking, notwithstanding that the smallest branches were very delicate. *The aorta contained a similar clot. All these clots were of a bright yellow color, almost entirely free from colored blood-corpuscles, and presented almost an organized appearance, and were without doubt formed long before death.*

The large venous trunks were distended with partially coagulated black blood ; the heart, arteries and pulmonary veins contained little or no blood.

When the black blood from the large venous trunks was exposed to the atmosphere, it assumed slowly and imperfectly the arterial hue. The blood appeared to have been collected in the capillaries and veins. If the chemical changes between the colored blood-corpuscles and liquor sanguinis, and between the blood corpuscles and the capillaries, and the structures and fluids surrounding the capillaries be arrested, as a necessary conse-

quence the circulation of the colored blood corpuscles through the capillaries might be greatly interfered with.

Lungs.—Normal in appearance and structure; lower (dependent) portions congested with blood. This was due to the action of gravitation. The trachea, bronchial tubes, and air cells contained much froth.

Abdominal cavity.—Alimentary canal presented nothing abnormal.

Liver.—The liver presented a much darker color upon its exterior than usual, but not the dark slate color of cases of malarial fever of longer standing. This organ contained animal starch, without a trace of grape sugar.

Spleen—Enlarged, softened, disorganized, and of a dark-slate malarial color; when pressed gently between the fingers, the trabiculæ could be felt giving away. The dark effused blood of the spleen, was found, under the microscope, to consist of colored and colorless corpuscles and dark granules; some of the colored corpuscles were swollen, and altered in shape. The alteration was by no means universal or remarkably great.

Kidney.—This subject had but one kidney; this corresponded to the right kidney. With the exception of a slate-colored spot upon its inferior surface, the kidney presented nothing unusual.

After a careful examination of the symptoms and pathological alterations presented by these two cases of congestive fever, it appears that, with the exception of the heart-clots, we do not discover any pathological changes of the cerebro-spinal nervous system, and of the organs, which of themselves would account for the sudden severity of the symptoms, or the death of the patient.

As far as an examination with the eye extended, no structural alterations were discovered in the structures of the brain, sufficient to account for the sudden and alarming symptoms of delirium or coma.

Whatever were the alterations of the nervous elements in these cases it was evident that they could not be reached by the most energetic and vigorous treatment. It was impossible to arouse the action of the brain, notwithstanding that there was no inflammation, and only that congestion of the blood in the capillaries, which resulted from the feeble action of the circulatory apparatus,

the disturbance of the relations of the blood and capillaries, and the alterations of the constituents of the blood.

It can not be thought that the condition of the spleen in these cases, was sufficient to cause death, because cases have been seen where sudden death occurred from other diseases during convalescence from malarial fever, in which the spleen was apparently in a worse condition.

The same remark applies to the alterations of the liver; as far as our examination extended, they do not appear to have been sufficient to cause death. The stomach and intestinal canal presented no special pathological alterations.

Can we, then, from this analysis of the pathological phenomena, infer that the immediate cause of death did not exist in the pathological alterations of the organs and tissues, but in the disturbances of the general and capillary circulation, and especially of the function of the lungs, by the fibrinous coagula in the cavities of the heart and in the blood-vessels.

A careful comparison develops a close resemblance between the symptoms of concretions of fibrin in the heart and blood-vessels, and many of the symptoms of the cases of congestive malarial fever, were recorded.

In view of the rapid, feeble, intermittent pulse; disturbed, full, panting respiration; rapid feeble, fluttering action of the heart; cold extremities, exhaustion of the muscular forces, stupor, wandering of the intellect, inability to control the muscles and acts of excretion; in view of the sudden onset of all these symptoms in malarial fever; in view of the size and structure of the coagula found in the heart and blood-vessels after death, in the cases presenting these symptoms; in view of the close correspondence of these symptoms with those characteristic of the deposition of fibrin in the heart and blood-vessels; in view of the observations of various physiologists and pathologists, we are justified in asserting that the fibrinous element of the blood, may be deposited in the heart and blood-vessels during life, in malarial fever, and not only give rise to a distinct set of phenomena, but cause death in cases which otherwise would not have terminated fatally.

Dr. Jones concluded his lecture with the statement that the

full discussion of the origin and pathology of heart clots, involved the physiology of the coagulation of the blood and the effects of fibrin, and the relations of the solids to the blood.

This complicated subject could only be treated with profit in lectures devoted specially to this subject.

(Reports of the lectures of Professor Joseph Jones, on these subjects connected with heart clots, will appear at some future time.)

Medical Memoranda : PROF. HAWTHORN'S Clinic.

BECAUSE of a lack of the concomitant circumstances of a clinical lecture — the actual presence of the patient; his appearance; observed condition of pulse, tongue, skin, respiration, expression, etc., etc.; each minutia of which is concerned more or less largely in making up the case — it is an extremely difficult matter to communicate satisfactorily otherwise what is so easily taught at the bedside. For this reason simple didactic teaching can in no degree be substituted for personal observation, nor written description for individual experience. Patients must be seen in order that the nature of diseases may be fully realized and in any clinical report little more can be done than to call attention to the general conclusions of the writer, deduced from the solutions of a number of problems bearing, at best, only a resemblance to each other.

Systematic works on the practice of medicine are, in the main, failures, as must be every attempt to lay down definite rules for the treatment of special diseases. No true physician ever meets with two cases of the same disease precisely alike, and his therapeutics must be constantly modified by the temperaments of his patients; their previous habits; state of system at time of attack; conveniences or inconveniences about the sick room (constituting often invaluable auxiliaries or serious obstacles to the management of the case) and many other circumstances, the importance or even the existence of which the most tediously detailed account could not make intelligible.

For this reason, too, statistical reports are of only very remote proximal value. Every physician must have suffered at times

mortifying disappointment on comparing results in his own practice with those reported by others. It is difficult always to communicate an accurately truthful idea by words, and one's prejudices so color his impressions that though he may state what he honestly believes, his assertions will often fail to meet confirmation.

An acquaintance with practical medicine must continue a matter more of observation than of reason or of book-learning. It is lamentable besides that most of those who even attempt to reason on medical subjects are prone to travel backwards. Starting with conclusions they pervert and invent the facts which are to assist them to their premises and often succeed in deceiving others much more than they are themselves deceived. Current medical literature affords daily illustration of false teaching. Errors set adrift by plausible scribblers are often extremely difficult of eradication and work much harm in the hands of the great unthinking. More labor is constantly necessary in disproving long accepted but erroneous beliefs than in promulgating positive discoveries. It had so long been orthodox to prescribe mercury for its supposed action on the liver, that it required two years of rigid investigation and the sacrifice of a multitude of dogs by a learned commission of the British Medical Association, to prove that a practice which had its origin in a chance remark of the most impudent charlatan of any age, Paracelsus, possessed really no foundation in fact, and that, after all, this substance rather diminishes than increases the production of bile.

In my teachings in the Charity Hospital I have endeavored never to lose sight of the fact that they were students, beginners, to whom I talked, and constantly kept in mind that they had yet to acquire a familiarity with, and a knowledge of, the manner of applying the most elementary details of the profession. I endeavored to connect always symptoms with the known pathological anatomy or essential nature, as far as understood, of any disease under consideration, and to make rational application therefrom of the therapeutic agents at our disposal. While I systematically discountenanced a superstitious confidence in the efficacy of drugs, I studiously endeavored to instil a belief in the availability and value of the measures on which we depend for the cure or modification of disease.

It is a great mistake to confine medical instruction simply to the impressing of facts. Students should be taught *how to think at the bed-side*, and to deduce principles capable of generalization and of application under varying circumstances from the facts there observed. I once heard a lecturer on medicine, after urging his audience to remember this fact, that fact and another, eloquently proclaim that a pyramid of facts is a pyramid of truth. This assertion is not easily gainsaid, but the attempt to recollect any great part of the facts in medicine without associating them under principles would be a hopeless, and even if it could be accomplished, a useless undertaking. Knowing every fact in the entire scope it would yet be necessary to construct out of them *principles* before they could be made of service in the treatment of the ever varying phases of disease.

To those, then, who listened to my lectures the following report must appear meagre for want of the familiar illustrations and other accompaniments to which whatever of interest they possessed was chiefly due. I shall confine myself in it, as in the original lectures, strictly to matters of practical importance and to doctrines established by sound clinical observations.

PNEUMONIA.

There were treated in my hospital service between 15th November 1868 and 20th March 1869, seventeen cases of pneumonia, as follows; viz:

CASE I.—James Lowry, negro, aged nineteen, boat hand; admitted in first stage, on 26th December; attacked on 25th; lower lobe of left lung involved; no complication; discharged well January, 12th.

CASE II—Joseph Jones, negro, aged twenty-seven; lower lobes of both lungs; attacked December 12th; admitted December 26th; left the hospital before quite well, but much improved.

CASE III.—Henry Harris, negro, aged thirty-five, carpenter; lower lobe of right lung; became ill on 20th December; admitted 25th; part of lung involved; consolidated. Discharged cured January 7th.

CASE IV—Wm. Carson, negro, aged twenty-three, boat hand; attacked December 21st; admitted December 27th; right upper

lobe involved and in second stage on admission. Discharged cured January 7th.

CASE V.—Andrew Johnson, negro, aged nineteen; attacked December 25th; admitted December 26th; upper lobe of left lung involved and in second stage. Subsequently had pleurisy, with considerable effusion into the right cavity of the chest. Left the hospital before quite well, January 7th.

CASE VI.—James Farrell, laborer, aged forty-five, an Irishman; intemperate; attacked 24th December; admitted 31st, in low typhoid condition; dry tongue; quick, small pulse; dull and in great measure insensible to suffering; entire left lung involved, over which were heard bronchial breathing and numerous subcrepitant rales; prognosis unfavorable from the first examination; sank gradually, and died January 2d.

CASE 7.—James Boyle, aged 46 years, an Irishman; pleuro-pneumonia of right side; attacked December 30th; admitted January 6th; died January 9th.

CASE 8.—Thomas Fitzgerald, aged 25 years, an Irishman, laborer; attacked December 24th; admitted, December 27th, with pneumonia of upper lobes of both lungs in second stage; discharged well on February 1st.

CASE 9.—William Brown, negro, aged 32; attacked January 8th; admitted January 11th; pneumonia of upper lobe of right lung in second stage; discharged cured January 20th.

CASE 10.—Charles Williams, negro, aged 22; attacked January 18th; admitted January 20th; lower lobe right lung; pulse small, quick and frequent; temperature high; been long the subject of intermittent fever, which complicates his great prostration on admission; died January 24th.

CASE 11.—William Robertson, negro, aged 25; attacked February 7th; admitted February 11th; intense jaundice; great asthenia; upper lobe of right lung consolidated; discharged well March 7th.

CASE 12.—Zachary Taylor, negro, aged 20; attacked February 19th; admitted February 24th; pneumonia of upper lobe of right lung in second stage; discharged well, March 4th.

CASE 13.—George Higgins, negro, aged 19; attacked February 1st; admitted February 25th; pneumonia of upper lobe of right lung in second stage; discharged well.

CASE 14.—Adam Smith, negro, aged 36 years; a very intemperate, powerful, muscular man; attacked on steamboat February 18th; reached hospital February 25th; pneumonia of lower lobe of left lung; intense jaundice; great depression; uncontrollable and incessant hic-cough, which prevented sleep and rendered impossible a thorough exploration of the chest; died, March 1st; autopsy showed pleuro-pneumonia and peri carditis.

CASE 15.—Jack Williams, negro, aged 15 years; attacked February 22d; admitted February 28th; small portion of lower lobe of right lung involved; great depression; left hospital much improved on March 4th.

CASE 16.—Primus Picket, negro, aged 23; became ill February 20th; admitted March 2d; lower lobe of right lung in second stage of pneumonia; discharged well March 18th.

CASE 17.—Anthony Cuthbert, aged 69; admitted March 17th; right lung consolidated by pneumonic inflammation; complained of excessive tenderness over the liver; died March 20th. Post-mortem examination showed the entire right lung in third stage of pneumonia, (stage of purulent infiltration); covering the convex surface of the liver was a thin, translucent pellicle of lymph easily stripped off; no distinct evidence of peritoneal or hepatic inflammation.

Of these seventeen cases Nos. 5, 6, 7, 10, 14 and 17 died.

At a glance this statement of the proportion of deaths, especially in the face of Dr. Bennett's reports of a mortality of only one in twenty-seven or thirty cases of pneumonia treated by him, is quite astounding. Instead of less than three and a half, we have here a death rate of nearly thirty per cent. But it will be seen at once how the case is altered by a resort to his system of special pleading and thus excluding all but the uncomplicated and simplest cases of the disease. Thus case six was an intemperate Irish laborer and did not enter the hospital until seven days after the beginning of his illness, and then in a low, typhoid condition, with one entire lung involved.

No. 7 was admitted on the seventh day, though no complication is mentioned.

No. 10.—Had previously to his attack been the subject of intermittent fever, which continued after the pneumonia began;

—recognized as a very serious antecedent to and complication of this disease.

No. 14.—A very intemperate man, a deck-hand on a steam-boat, was attacked while on the river; came into the hospital on the seventh day with pneumonia of an entire lung, jaundice, pericarditis and uncontrollable singultus.

No. 17.—Was an old negro, sixty-nine years of age, and had inflammation of a whole lung, besides a peritoneal affection.

In neither of these five cases does the report fail to mention an almost necessarily fatal complication or serious circumstance, except in that of No. 7, and, further, he entered the hospital late in his illness. But admitting this to be a fair case for criticism and the grand result is at last equal to Dr. Bennett's. *Per contra*, several of the cases which recovered were by no means mild. Thus, in No. 2 the disease was double, involving both lower lobes; in No. 5 pleurisy with effusion attacking the opposite lung, supervened; in No. 8 the inflammation involved the upper lobes of both lungs; No. 11 was the subject of intense jaundice and extreme asthenia,—while nearly every patient came into the hospital several days after the commencement of his illness. On the whole, then, I think it is fair to say that the results of treatment in these seventeen cases of pneumonia were at least ordinarily satisfactory.

No exclusive plan of treatment for pneumonia was pursued or recommended. Two cardinal points were kept constantly in mind, viz:—1. The *natural history* of the disease: [a]—stages in its progress; [b]—duration of attack; [c]—strong tendency of uncomplicated cases towards recovery. 2. Manner of death: *chiefly by asthenia*. It was urged that each *patient* was to be treated *and not his disease*. Symptoms were closely watched and every source of disturbance or depression, as far as possible, guarded against, modified or counteracted. When, during the early stages, the inflammation, however limited in extent,

[NOTE.—It is interesting to observe that out of the seventeen cases, in six the disease was confined to one or the other upper lobe; while in one it attacked both upper lobes, and this notwithstanding that neither history nor subsequent observation led to the slightest suspicion of tubercular disease; in four cases was the left lung only involved; in eleven the right; while in two the disease was double.]

was intense (its intensity judged of by the amount of general disturbance, as the frequency and *force* of the pulse, hurrying of respiration, pain, cough, insomnia etc.,) measures of a sedative character, and consequently conservative of the patient's strength were adopted. Pain was looked upon as an important element of depression and was relieved by dry cups over its seat, the administration of anodynes and the use of an oil silk jacket covering the entire chest. Much value was attached to this latter measure for its soothing and gently sedative influence. Preventing evaporation from the surface as well as radiation, it supplies the essentials of a poultice—warmth and moisture. It is much preferable to a poultice for the reason especially that it does not require, as does a poultice, frequent removal, thus occasioning exposure of the surface to sudden alterations of temperature. In the chest complaints of young children it answers an admirable purpose. It is to be worn next the skin, and is very easy of application. Sleep was looked upon as essential and if this did not come spontaneously for several hours in every twenty-four it was secured by opiates. I am satisfied that the indispensability of sleep and the exhausting effects in all diseases of a lack of it, are overlooked by many physicians. It is only during sleep—rest—that repair of the nervous system gets in advance of, or equals waste, and when to the natural exhaustion of merely being awake—*i. e.*, alive to impression—is added the wear and tear from acute disease, failure of the vital powers, which have so direct a dependence on the nervous system, necessarily progresses with great rapidity. We all know the unpleasant effects of the loss of a night's rest even in health, and though in many acute diseases the patient while under some unnatural influence seems to get on well enough for awhile without sleep, yet when that stimulant is withdrawn, as in the sudden subsidence of a fever, prostration is often extreme and not infrequently fatal. A bad result might often be guarded against by securing at the proper time, through artificial means, rest and recuperation of the nervous system. Nothing can altogether supply the place of rest to the system at large and insomnia is a serious complication of any disease.

For the control of excessive vascular excitement, sedatives,

both arterial and nervous, were administered. By opium the irritability of the nervous system, on which so greatly depended the cardiac disturbance, was diminished, and by an arterial sedative (as tartar emetic, the one generally preferred,) the heart's action was more directly controlled. This was regarded as very important and tending in a positive degree to protect the patient's strength. Only such depressing agents should be used, however, as are easy of control and the influence of which can be readily limited, for it is never to be forgotten that the *tendency to death in pneumonia is chiefly by exhaustion*. The administration, then, of sedatives in the earlier stages is not incompatible with a belief in the value of, and frequently the necessity for, a resort to stimulants and actively supportive measures later in the same case. The indication for the use of stimulants was carefully sought for in the condition of the patient. Nutritious diet, unstimulating at the beginning, as arrow root, milk and lime water, and later in the disease, beef tea, etc., as the state of the patient seemed to demand, was thought necessary throughout. But resort to alcohol was had always with care. It is impossible to specify the precise conditions which call for its use, but besides general evidences of failure among the most unmistakable is a lack of proper force in the pulse, with or without increased frequency. From the strong tendency in the practice of the present day towards a "renewal of life" in every disease, there is no doubt that alcohol is rather indiscriminately and often injudiciously given. So strongly has this "renewal" idea taken possession of the medical mind and so thoroughly does it impregnate our teachings, that we are in much danger of mistaking the better means of carrying it out. Students now-a-days very soon acquire the habit when asked what they would do in any emergency mentioned of answering "give good diet and stimulants," or "stimulate the patient," supposing when in doubt that the chances are vastly in favor of such suggestion being approved. The administration of alcohol requires as much discrimination as that of any other medicine. Being an active, potent substance, its capability of evil is great. A familiarity with its habitual imbibition is apt to diminish our respect for its power and because its effects are not always palpably and immediately bad, we come to regard it as an agent not

likely to do any harm if it does no good. I have always urged its cautious use with the sick. Many cases occur to the careful practitioner in which the call for it is extremely questionable and at such times it must be given as we give other strong medicines, experimentally, closely watching its effects. It cannot with propriety, nor even with safety, be substituted for the positive and natural nutritive substances. Its own influence on nutrition is, very probably, almost exclusively negative and consists in taking, in part, the place of the tissues in the process of oxidation. It should, then, be given in diseases only as supplementary and auxillary to food, *its value in any particular case being in proportion to the degree of depression of the nutritive powers.* I am in the habit of withholding it altogether throughout many cases of acute disease and when prescribing it at all, doing so with the same circumspection that I would give calomel, aconite or veratrum viride.

The above is a sketch of the general plan which both reason and experience seem to justify as best in the treatment of pneumonia; of course it is *very* general, but it could not be made more definite without the danger of originating misapprehensions. Every one in order to be trusted to practice medicine at all should have sufficient knowledge of the nature of disease and the action of remedies, to be able to make modifications of treatment in any particular case. That system of medical writing and teaching which consists in giving in order the causes, symptoms, diagnosis, pathology and treatment of the different diseases, all dove-tailing together with as certain a result as follows the multiplication of two by two, without making clear either the connection between symptoms and pathology or the distinct purpose for which each prescription is given, fails in the chief purpose of instruction namely, *viz.*, to assist one to become an intelligent and independent practitioner.

A matter of as great or more importance than the giving of medicines to a pneumonia patient, is a proper attention to the discharge of the different functions and the removal or prevention of all sources of disturbance or discomfort. The bowels should be emptied by enema when they do not move once a day of themselves. Fluid should be allowed (cold water if desired) and gentle

diuretics given, if necessary, to keep up the activity of the kidneys. Noise should, if possible, be suppressed; conversation with the patient abstained from, and light excluded in a great measure from the room. While in the Confederate States Army I adopted with great benefit the isolation of patients suffering from pneumonia, and was accustomed to place them in a dark but well ventilated apartment, kept at a moderate temperature, and to require the nurse to remove his shoes (when he had any) so as to avoid noise.

I have said nothing of a plan of treatment of pneumonia still in vogue in most parts of this country, that by calomel and opium and the application of blisters. I mention it now only to say that in my opinion nothing but harm can come of it. I have been often told that patients in the country districts require it, however little we may find it necessary in our "hospital subjects." In this there is, to me, a great fallacy, and has just as much truth in it as that the "type" of diseases has changed of late.

It is a notorious fact that during the late war regiments in our army which came from the country and which were supposed at the beginning to be so capable of endurance, were decimated by disease; while those from the cities, made up of Irishmen and other foreigners, picked up about the levees and taken from steamboats, back-streets, etc., the very class from which our hospital patients come, suffered infinitely less. The truth is, that in the South the population is far from vigorous, and this, in my estimation, is due in a great degree to the lack of variety in diet. Salt meat and corn bread constitute the staple articles of food, many going for months without fresh meat or vegetables. Every one who has had anything to do with sick negroes on plantations will remember how readily the most muscular and fattest of them succumb to acute diseases. The explanation seems obvious—the lack of a proper variety in diet. Although vigorous in appearance their vitality is really feeble.

I must conclude, then, that calomel and opium are at least as little required in country as in hospital practice, and never forgetting that the tendency to death in pneumonia is chiefly by asthenia, calomel should be rejected. Whatever good might follow

the prescription should be attributed solely to the conservative influence of the opium.

Blisters in pneumonia I regard as essentially bad. They are incapable of arresting the inflammation and after their first action they cease to be counter-irritants especially, become irritant to the system at large and, consequently, sources of depression. Another and a stronger objection to them is, that we cannot avail ourselves of their active counter-irritant influence by frequent repetition. For my part, I have rarely or never applied a blister without afterwards regretting it. I prefer turpentine stapes or mustard-plasters when such agents are demanded. We may avail ourselves of the good effects of these as often as is requisite, while we avoid the bad.

It is extremely common in the South and Southwest to give large doses of quinine in pneumonia as well as in most other diseases, under the vague fancy that everything is imbued with malarial poison. This practice I frequently took occasion also to condemn. In the first place, all medicines are evils of themselves, though sometimes indispensable ones; and in the next, quinine in such doses as it is usually given among us is a powerful general sedative. By it the stomach is disturbed; the appetite destroyed; digestion upset; the nervous system is somewhat durably depressed, and the system at large much debilitated. The habit of giving quinine is a very bad one. Without it there are many physicians who seem unable to make a prescription for any disease whatever. When they don't know what else to give—and in nine cases out of ten when it is not necessary to give anything—they "give a little quinine." No medicine should be ordered at any time unless good ground exists for believing it indicated and the loose way of dealing out drugs which is indulged in by many practitioners is extremely reprehensible. When quinine is required give it and at no other time.

Cerebral Embolism.—Left Hemiplegia.—Brain Softening.*

MICHAEL HIGGINS, an Irishman, laborer, aged fifty years; admitted to Hospital December 11th, with chronic diarrhoea, from which he had suffered for two years. His habits had been somewhat intemperate and there was the scar of an old bubo, occurring twenty years before, in his right groin. He was very much debilitated at the time of entering the Hospital, evacuations from his bowels very frequent, and he complained of tenderness diffused over the abdomen. Feeling a little better on Sunday morning (13th) he attended service in the Hospital chapel, and at noon, while standing by his bed eating his dinner, he was observed to fall backwards at full length on the floor. He made no exclamation nor any attempt to raise himself, but lay as he fell, quietly chewing a mouthful of food which he had taken immediately before. He stated afterwards that the fall was preceded by vertigo and that he was perfectly conscious during the whole transaction. (The power of speech was temporarily absent.) From that hour until 9 o'clock A. M. of the 14th he had but three faecal evacuations. During the night he complained a good deal of abdominal pain and at half past eight began talking of persons being present; spoke to them and desired the nurse to turn out the fiddler, whom he supposed to be in the ward. But while in this state of mind he would answer correctly all questions put to him. The nurse stated that he seemed to have some difficulty in swallowing solid food.

Dec. 14th—Patient lies flat on his back with his head to the right and his eyes turned upwards and to the right also. His right leg is crossed over the left and the left arm somewhat under that side. (He rolled out of bed towards the left this morning.) Skin warm and moist except over the affected side in which he complains of coldness, its temperature being sensibly reduced. A cicatrix over the left eyebrow, result of sword-cut, and a few scars on the legs caused by bullet-wounds.

* Report begun by Mr. (now Dr.) W. Hillard, and completed by Mr. (now Dr.) C. Gaudet.

Here allow me to express my thanks and great obligation to my chief of clinic, Dr. E. T. Norman, for the invaluable service which he rendered both to students and to myself throughout the Course of Lectures, and I am glad to announce to those who may be interested, that he continues his connection with my clinic. All my case-histories passed through his hands; and were revised or re-written by him.

F. H.

His memory is unaffected—answers all questions correctly, though between times his mind may wander to other things and scenes. He speaks in a slow, quiet way, like one talking against his will. When asked to look at me (standing to his left) he turns his head still more to the right and strains his eyes in the same direction. If asked what he is looking at he replies correctly “the bed-post.” When I bid him firmly to look at me he slowly turns his head till his face lies in the axis of his body, still keeping his eyes in the opposite direction. By fixing his gaze on my finger and then moving it slowly towards the left, at the same time keeping his attention concentrated, they turn until he looks directly before him ;—but he seems incapable of making the effort to turn them farther. Left pupil larger than the right; both somewhat diminished in size; both respond to light; brows corrugated; face anxious; some frontal headache; face drawn a very little to the right; tongue protrudes slightly to the left, though he can turn it to the right when you insist on his doing so; he is unable to “hawk” up his spittle; paralysis of left arm and leg complete and when urged to move either, moves the corresponding right limb and says he is doing as you tell him; reflex action present in paralysed limbs; hyperæsthesia of left side with inability to locate the seat of unpleasant sensation—confounding the right and left sides and the upper and lower extremities of the same side.

Respirations twenty-one per minute with an occasional sigh; respiratory murmur harsh on left side with bronchitic sounds all over both lungs; some little cough; no expectoration; the heart intermits once in a hundred beats; pulse small, weak, 84 per minute—same on both sides; hepatic dullness slightly increased.

Dec. 15th.—He ate well all day, asking for food at proper times. Talked a good deal to himself.

Dec. 16th.—Since eight o'clock last evening he has been passing all his evacuations in bed; faeces of the consistence of well boiled mush and very offensive—color almost black. Did not sleep well last night—kept talking irrationally. Is inclined to be obstinate and irritable, refusing to protrude his tongue, calling names and making grimaces. Says his abdomen and back are sore from a mustard plaster which he (imagines) he put on him.

self last night. Is able to "hawk." Left fore-arm and leg flexed this morning and require some force to extend them. Says the extension gives him pain. Slight twitching at the left oral angle.

17th.—Much the same as at last report. Complains of pain in the cardiac region, in head, both eyes, and under the shoulder blades. Keeps his head and eyes more in the median line and can turn his head to the left, but not fully.

18th.—No change; diarrhoea continues and he grows weaker; ate nothing yesterday.

Temperature :

Right hand, 91; left hand, 80; right elbow, 97½; left elbow, 91½; right axilla, 98½; left axilla, 96½; right pulse, 96; left pulse, 96.

19th.—Right hand, 94; left hand, 88; right elbow, 97; left elbow, 93; right axilla, 100½; left axilla, 97½; right pulse, 96; left pulse, 96; respirations, 28.

20th.—Right hand, 87; left hand, 82; right elbow, 94½; left elbow, 91; right axilla, 99; left axilla, 95½; right pulse, 98; left pulse, 98; respiration, 23.

Diarrhoea continues—growing rapidly weaker. Pulse can scarcely be felt at the ankles.

21st.—Has become drowsy; while examining him this morning his pupils contracted to the size of a pin's head, remained immovable for a few moments and then became as before. Respirations, 24; pulse 96; weak, very small, regular.

Temperature :

Right hand, 89°; left hand, 81½°; right elbow, 95°; left elbow, 93°; right axilla, 100°; left axilla, 97°.

22d, A. M.—Gradually sinking. P. M. Saw him a few moments before his death (which occurred at eight o'clock) when he was perfectly rational; unable to speak except in a very faint whisper. Said he was constantly growing weaker. Died of asthenia.

Post-mortem.—Examination fourteen hours after death. *Rigor mortis* present in all the muscles except those of head and neck. It is as well marked on the left (paralyzed) side as on the right.

Encephalon.—The right middle cerebral artery was found plugged for two inches by a somewhat beaded, rather recent clot.

The upper central portions of the anterior, middle, and posterior lobes; the thalamus opticus and the corpus striatum of the right hemisphere, are completely disorganized; softened; broken-down. The cortical portion of the brain covering the diseased mass was of usual consistence and formed a sort of including shell.

Heart.—An unusual amount of fat on the base of the heart; muscular structure, cavities and valves in healthy condition. No disease of aorta.

Carotid Artery.—On opening the right carotid artery, an olive-shaped dilatation, to about one eighth or one-sixth of its diameter, was observed occupying chiefly the outer aspect of the vessel, beginning a little below and extending up the external branch to a short distance above the bifurcation. A small calcareous scale was interposed between the coats at this point and stretching across the external vessel immediately above its origin, dividing the saculus mentioned into two equal parts, above and below, was a firm fibrous band of old formation, and very likely the result of a previous inflammation. Lodged across this band, and nearly filling the pouch above it was a fibrinous clot, the lower portion of which overlapped the septum at the bifurcation—its extremity lying free in the internal carotid. This clot was easily removed from its resting place, and the lining membrane of the artery corresponding to its site was found stained by imbibition, but showed no evidence of being the seat of inflammation. The aspect of the clot, looking towards the centre of the artery and over which the blood had flowed, was almost washed of coloring matter, while its applied surface was discolored by a dark layer of coagulum. The centre of the clot was found to be undergoing fatty change. Fatty degeneration of the liver; lower bowels denuded of their mucous membrane in many places; patches small, circular or oblong, with clear-cut edges.

(*Report to be continued.*)

CORRESPONDENCE.

Letter from New York.—No. 4,

NEW YORK CITY, May 27th, 1869.

Dear Journal:—We of New York City have been watching with much interest the proceedings of the American Medical Association recently held in your hospitable city. We have been much gratified with the harmonious action and good feeling displayed on every side, and wish it could have been our good fortune to have participated in the social gathering. With us, just at present, things are very quiet. For the last few weeks the health of the community has been remarkably good. The spring, for the most part, has been a most delightful one, and the temperature much above that of the corresponding weeks of last year—on some days as high as twenty degrees above that of corresponding days of 1868.

Last week the total amount of deaths in our city amounted to 516. The annual death rate, per 1,000, (the population of the city being estimated at 1,000,000,) is 26.83. Percentage of zymotic diseases, on total mortality, 30.04; percentage of phthisis, pulmonalis, 15.11; of diseases of respiratory system inclusive of phthisis croup and diphtheria, on total mortality, 36.05; of first year of life, on total mortality, 29.16; of first five years, 47.09.

In Brooklyn the total number of deaths amounted to 147. Annual death-rate per 1,000, (population estimated at 370,000,) 20.66. Percentage of zymotic diseases, on total mortality, 23.13; of phthisis pulmonalis, 13.61; of diseases of respiratory system, inclusive of phthisis, croup and diphtheria, on total mortality, 28.57; of first year of life, on total mortality, 19.05, of first five years, 38.78. Total number of births in New York, certified by physicians, 125; stillbirths, 51; persons married and legally certified by clergymen and magistrates, 338.

How do these statistics compare with those of your southern city?

“*Velocipedementia*” is dying out with us—many of the training halls are closed, and velocipedes are decidedly at a discount.

The Medical Gazette says, "Oppolzer, of Vienna, publishes the following denunciation of *velocipedementia* :

"It appears as if man is not yet contented with the present rate of mortality, which is even now quite large enough ; for only on this ground can the passion for the velocipede sport be found. It is certain that every over-exertion of the muscles, especially such as is necessary in the management of a velocipede, which requires so great an over-exertion of all the muscles, causes not only hypertrophy of the muscles and of the heart, but can ultimately induce the most various diseases of the heart. Even aneurisms are no longer rare phenomena."

At the sixth annual meeting of the "New York Society for the Relief of the Ruptured and Crippled," held a few evenings since, the surgeon of the Association stated that during the past year, 2,285 patients have received treatment.

The Corresponding Secretary gave a favorable account of the progress of the new hospital on the corner of 42d St. and Lexington Avenue. When the hospital is completed, 200 crippled children will be received as in-patients, medically treated, educated and provided with all essential comfort, free of charge, although many will require for treatment expensive surgical appliances that will restore them to self sustaining ability in the future, and save them from a life of dependence upon public charities. There will also be dispensed to the indigent afflicted adult all the requisite surgical appliances for enabling them to labor for the support of their families, thus not only relieving an individual, but oft-times large dependent families that would otherwise become a public charge—the parents being disabled from the want of expensive surgical appliances which they are unable to purchase.

The spring sessions at both our male and female medical colleges are now in progress. It appears that female practitioners and students are not treated abroad with the toleration and respect, for the most part, that they receive amongst us. The University of Edinburgh recently decreed that female students should be admitted to the medical course the same as male students, but the latter class made such demonstrations and remonstrances against this liberality that the decree was revoked, which, to say the least, does not reflect much honor upon the manliness of

the student, or the firmness of the authorities of the University.

Since writing the above, we notice the following in the Medical and Surgical Reporter on "The Woman Question:" "At a meeting of the Edinburgh University Court, held on April 19th, appeals were heard against the admission of Miss Blake to certain classes in the University during the coming summer session, as approved of by the Senators. The following resolution was adopted: 'The Court, considering the difficulties at present standing in the way of carrying out the resolution of the Senators as a temporary arrangement in the interest of one lady, and not being prepared to adjudicate finally on the question, whether women should be educated in the medical classes of the University, sustain the appeals, and recall the resolution of the Senators.'"

"The New York Legislature has passed a law to protect the public against ignorant apothecaries' clerks. It provides, under heavy penalties, that no person shall prepare a prescription unless he has served two years apprenticeship in a drug store, or is a graduate of a medical college or college of pharmacy, except under the direct supervision of some person possessing one of these qualifications. The act contains other provisions to make these regulations effective, but this is the gist of the law."

The meetings of the Pathological Society are held regularly every two weeks, and are full of interest—many most interesting morbid specimens are presented at each meeting, but more of them, dear Mr. Editor, when we write again.

Yours very truly,

JAMES B. BURNET.

COLUMBIA, S. C., May 11, 1869.

Editors Journal,—I beg leave to add the following notes to the "Case of Ligation of Internal Jugular Vein." (ART. III, p. 438.)

May 11th.—About a month ago, his property being levied on by the Sheriff, his mind became more depressed, and although his debts were satisfactorily settled by friends he became more apathetic than ever. For sometime I have suggested, but in vain, that he should be consigned to our lunatic asylum, as his

mind is unsound, and his enlargement hazardous. On the 3d instant, he attended an auction sale, and although no interest of his was involved, went home and declared that he was sold out and his family would have to move into the streets. He has not drank for some weeks and now refuses to eat a morsel. On the 8th instant I was called, and found him in his third convulsion, which lasted near two hours—right pupil half size of the left, but no symptoms of hemiplegia. After recovering consciousness he refuses to take anything at all. On access of fourth convolution, I placed him under chloroform which acted kindly, and he slept half an hour. The spasms continued at intervals, ending in *coma*, and he died this A. M.

I regret extremely that in spite of every effort I am denied the satisfaction of an autopsy which would have enabled me to complete the details of this very interesting case.

R. W. GIBBES.

HERNANDO, MISS., May 22, 1869.

*Eds. Journal,— * * ** I have had to treat recently (to me) a very singular case of pneumonia. On the 8th instant I was called to visit a young gentleman about twenty years of age; he had been under treatment of another physician for three weeks. I found him in second stage of pneumonia, complete hepatization of right lung, had considerable fever and a dry cough. I commenced the treatment with half grain of calomel, Dover's powder and ipecac one grain each, every four hours. Applied a blister over anterior portion of the lung, and an expect. mixture every four hours, alternating with the powders. I neglected to state that he was suffering some pain, and there was no expectoration and there had been none. On the 9th I found him free from pain and fever. 10th and 11th, same treatment. 12th, applied blister over posterior portion of the lung. 13th, cough entirely ceased; kept up the expectorant mixture and toddy (which he had been taking since the 10th). Percussion still returned a dull heavy sound, and auscultation revealed no sound whatever. 16th, the

respiratory murmur beginning to be audible. 19th, distinct and clear over the entire lung—dismissed the case.

This case may not be an uncommon one to you and others, but I have never seen a case of pneumonia that progressed so far without more fever, and more or less expectoration (had no fever since the 9th). * * *

Respectfully,

L. H. HALL, M. D.

✓ *Effects of Morphine not mentioned by Medical Writers:* By JOHN SPROTT, M. D.

BENTON, ALA., March 26th, 1869.

Eds. Journal—Being afflicted with a painful and rather an anomalous form of rheumatism, I have been compelled to use daily, for the last three years, from two to four grains of morphia sulphas, and have experienced effects not generally mentioned, if noticed by medical writers and the profession, viz: Morphine acts almost invariably as a diuretic in from one to two hours. It often produces a painful cramp of the stomach, and especially is it liable to do so in persons not in the habit of using it. This effect is readily relieved by a small quantity of some stimulant, brandy or spirits of camphor being the most effectual. One-eighth of a grain acts more powerfully on an empty stomach than half a grain after eating. It dissolves perfectly in a solution of iodide of potassa, and one grain in it acts with more power than two in water. When taken in a full dose it changes the voice, producing a temporary hoarseness. By keeping slightly under its influence, it is a perfect antidote against taking cold. In the incipiency of catarrhs or colds, when given in full doses, it seldom fails to cut short the disease; and a second dose in ten or twelve hours, will generally complete the cure.

I submit the above without comment as to the *modus operandi*.

For the New Orleans Journal of Medicine.

BAUNCHIEDTISM.

THIS is a new mode of practice invented by Charles Bauncheidt, of Germany, as set forth in a pamphlet translated by M. L.

Lichtenstadt, of Atlanta, Georgia. This latter gentleman is a practical bauchiedist, and has been visiting our community for sometime administering his remedy to such patients as have despaired of relief from other sources. Of course he has had plenty of patients, at five dollars for each application, and as is usual in such cases, can get any number of certificates of marvelous cures, etc.

The practice is a revival of the old system of acupuncturation with some additions. A needle instrument called the biometer, containing thirty-three needles is applied to the depth of about one fourth of an inch up and down the spinal column on either side for nervous affections, or in any place affected by pain or disease, where the bones are not too superficial. After the acupuncturation he applies an oil, which acts hypodermically and by puncturation. He claims for his practice an abducent irritating and dissolving or re-absorbing effect. He appends a long list of diseases in which he promises relief or cure.

The oil itself is probably a combination of ol. tigliae, ol. olivarium, and morphine, as patients generally experience a lull in their nervous system after its application, and in some instances sleep is induced. The probability is that it is taken up hypodermically, through the punctures of the needles, and its anaesthetic effect throws a charm over the whole matter enticing patients to continue a treatment, which affords but little promise of a permanent cure. The originator proposes to get all the benefit of his invention, by keeping his oil a secret from the rest of mankind, and when he dies perpetuate it for the benefit of his children.

Mr. Lichenstadt has had quite a time among the rheumatic, neuralgic and hysterical patients of the vicinity, of course as the practice combines the principles of acupuncturation, pustulation and anaesthetism, relief has been afforded in many cases, and the astute German well paid for his trouble.

I have taken some pains to note the effect of the practice in different cases, and have become satisfied that it has no great virtues over the counter irritants in general use by the profession. It is perhaps the most successful humbug that has ever been invented to gull the public and catch pennies—combining as it

does, science with empiricism. An editor, subject to hæmorrhage of the lungs, was so charmed with it at first, that he announced through his paper its wonderful effects in his case. A few nights thereafter I was summoned in haste to see him with the most violent pulmonary hæmorrhage he had ever had. Another gentleman had an inveterate herpetic affection of the hand. The instrument was applied over the place repeatedly until the whole hand became swollen and painful, breaking out in small pustules to the ends of his fingers, and running up the arm to near the elbow. He applied to me for relief, and I became apprehensive that he might lose his arm from the poison injected into the system. Under judicious treatment, however, he soon recovered. Of all the cases falling under my observation, some have been made worse, some relieved, and none cured. Generally hysterical patients find the most relief.

We think the main virtue of the whole practice lies in the pustulation produced by the oil. The acupuncture acts mainly by the hypodermic inception of the anæsthetic solution in the oil, which simply alleviates without any prospect of a radical cure. As to the counter-irritant effect of the needles themselves, administered singly, they are painless, producing but little if any determination to the parts, and is only the reproduction of an old remedy long since abandoned by the profession.

E. M. PENDLETON, M. D.,

Sparta, Ga., April 30th, 1869.

CLINICAL RECORD.

COLLATED BY S. S. HERRICK, M. D.

Case of Vaginal and Urethral Inflammation: Reported by Dr. W.M. DESPRY, M.R.C.S., London, M.B., M.C. and M.D., Dublin.

JANUARY 2d.—Mrs. N., æt nineteen, married six mon'ths: Says that a few days after marriage she was attacked with irritation of the bladder, having constant desire to pass water, attended with severe burning pain; sexual intercourse so painful that it was seldom attempted; says there was a great deal of mucous in the urine.

When she applied to me says the desire to pass urine comes on in the evening, severely, about seven or eight o'clock, and continues all night; in the morning between five and six o'clock she gets easier, but never quite well; is obliged to remain on the sofa all day, and though she is obliged to get up through the night, almost every half hour, yet she scarcely passes more than four or five ounces of urine through the night. She does not pass more than eight or ten ounces in the twenty-four hours; the urine is dark brown, I presume from haematine; throws down a copious phosphatic deposite; when tested by heat and nitric acid shows that it is highly albuminous; the menstrual discharge regular but scanty, and very dark colored, nearly black; pains in the region of the kidneys, and very tender on pressure; pain in the head, particularly in the back part; great disposition to sleep, attended with a throbbing noise; the sleep disturbed by frightful dreams; pulse one hundred, small; tongue slightly coated; sick at the stomach occasionally. On examining the sexual organs found the labia minora very much inflamed, extending along the vagina and mouth of the urethra; the vagina hot; the cervix and os quite natural; the mucous membrane as far as could be seen was covered with small red papilla, same as appears on the end of the tongue when inflamed; bowels confined; ordered hip baths; to inject milk and water freely into the vagina; to take the following:

R.	Opii denarc.....	gr. i,
	Pulv. ipecac.....	gr. i,
	Camphor.....	gr. vi.

Ft. pil. vi. One every third hour.

After having taken two of the pills, she complained so of her head, that I was sent for. Shortly after I got there, she had a fit, resembling epilepsy. After recovering from it, she complained of feeling very stupid, and of constant giddiness, with sick stomach. Applied dry cups freely to the back of the head and spine; used the scarificator over the region of the kidneys, and got about six ounces of blood. As I was under the impression she was suffering from uræmia, I ordered—

R.	Bi-carb. potass.....	3 <i>i.</i>
	Carb. lithiæ.....	3 <i>ss.</i>
	Aqua.....	2 <i>vi.</i> M. Ft. Mixt.

Take a tablespoonful every fourth hour in about eight ounces of flax-seed tea, and to drink the tea freely to quiet the nervous system. Ordered—

R.	Valer. zinci.....	2 <i>i.</i>
	Extract Hyoscyami.....	grs. <i>vini.</i>
	Calomel and podophyll, aa.....	grs. <i>ij.</i>

Ft. Pil. *xvi.* One three times a day.

Continue the milk and water injections and hip baths.

If the pain becomes very urgent through the night, introduce into the vagina a piece the size of a bean of the following oint-

ment: Extract belladonna, $\frac{3}{4}$ i; tallow $\frac{3}{4}$ iv; mix. I could not get cocoa butter. After a few days, I had a sol. permanganate potass, one grain to the ounce thrown into the vagina, three times a day, after having it well washed out with the milk and water; in a few days the paroxysms were considerably shortened, and at intervals the patient felt easy.

I was called on one night to see her as she had got worse, found the husband had been to see her, and had had intercourse with her—which I interdicted for the future until she was perfectly recovered. After this improved gradually. As there seemed a periodicity in the case, and I was afraid to use quinine, I added two drops of Fowler's solution to each dose of the mixture which had a very beneficial effect. In the middle of February, missed her menstrual period; had sick stomach in the morning. She was much alarmed at it, but I suspected that she had conceived; in the end it turned out so. In the latter end of March she complained of slight burning pain merely when she made water—and referred to a particular part of the urethra. As all the secretions were natural, the urine having no more albumen, being copious and clear—I suspected an ulcer in the urethra; on passing a bougie, found the ulcer about midway between the orifice and the bladder; this seemed somewhat similar to that case recorded from Ashwell in Churchill's invaluable work. I treated it in the same manner; had to repeat the application only twice—after which with the use of fluid extract of buchu, I had the satisfaction of dismissing my patient well, and in the fourth month of pregnancy.

I consider this case interesting, as before I was called in she had been treated for two months for prolapsus; then by another practitioner for engorgement; the first kept her in bed with her hip raised, and her feet, as long as she could bear it, on the foot board of the bed; the latter ordered active exercises, walk as much as she could; a third; said she could not have engorgement as her menstrual discharges were regular—and all this without making any examination.

The aptitude she evinced to conception as soon as the vaginitis began to subside, I look upon as remarkable; if correct in my conjecture. I think it illustrates the tendency that mucous membranes have to continuous inflammation; commencing first in the vagina, extending along the urethra to the bladder; producing catarrh of that organ, as shown by the quantity of mucus she says she passed in the commencement and latterly by the albumen and phosphatic deposit, showing it had extended to the kidneys, along the ureters. I regretted very much not having a microscope during the progress of the case.

A Case of Wound of the Knee-Joint: By THOMAS J. MCKIE,
Woodlawn, S. C. V

HAVING recently had under my charge a case presenting some features of interest, and believing it a duty we owe to contribute of our experience to the common fund whenever it may be made available either for the advancement of our profession, or for the benefit of humanity, I offer you a brief history of it, and the treatment used.

The subject, Mr. R., a Scotchman, forty years of age, a painter by trade, in fair health for one of intemperate habits, while descending from a ladder on the 14th of February last, brought his right knee violently in contact with a projecting nail, which inflicted a punctured wound directly over the inner aspect of the joint about one inch from the patella. He states that the limb was so firmly fixed that he was unable to remove it except by aid of the hand, and when thus removed a jet of blood, which ceased at once, followed; no more was thought of it, he being at the time "cup-shot."

Only a soreness was felt for three days after, when he started on a walk of fifteen miles into the country, which, from pain and inflammation thus set up, he was unable to accomplish until the second day, having to lay in the woods all night. Medical aid was immediately asked for but not obtained until the third day, being the eighth from date of injury. He was found lying in bed with knee semi-flexed, suffering from fever, pain and all the concomitants of inflammation. In the neighborhood of the injury which was found to be a small punctured wound in the situation above described, the parts were red, swollen and exceedingly painful to the touch, with a mere trace of glairy fluid escaping from the mouth of the wound. Motion of the patella also gave a creaking sound. Suspecting the nature of the accident, he was ordered the usual treatment—opium for relief of pain, an occasional mercurial laxative, low diet, the most perfect quiet, and water-dressings. Notwithstanding the appearance of suppuration for four days the case seemed to progress favorably; circumstances then required his removal to a neighboring house a fourth of a mile distant, and no other conveyance being at hand, this distance was performed in a buggy, causing considerable motion of the joint.

From this date he rapidly grew worse, redness and swelling involving the entire joint, suppuration becoming profuse, the constitution also suffering more, as indicated by daily febrile exacerbations, loss of appetite, profuse nightsweats and a general decline of the vital energies.

Believing that the further persistence in the ordinary modes of treatment would result in either the loss of my patient, his leg, or both, I was induced to try the effect of carbolic acid from the flattering report of its therapeutic value in various injuries, especially those involving the joints, as set forth in a recent paper by Prof. Lister, of Glasgow.

Accordingly, on the 10th of March, after putting the patient fully under chloroform a free incision was made a little within the inner hamstring where there seemed to be the greatest collection, and a large quantity of thick grumous matter allowed to escape. Carbolic oil (acid carbolic, $\frac{3}{4}$ i; linseed oil, $\frac{3}{4}$ j); was then thrown into the joint with an ordinary ear syringe through the nail wound and escaped through the one just made—thus washing out the suppurating cavity. The joint was next enveloped in woolen cloths saturated with carbolic oil, and directions given to allow the cloths to remain untouched except by an occasional drop or two of the oil over the mouths of the two wounds.

Suppuration almost ceased at once, he suffered no more pain, fever and night-sweats disappeared, appetite improved and convalescence was established. No other treatment was now used, neither splints nor bandages, and in four weeks the wounds were healed, and the limb like its fellow except for being one inch larger in circumference at the knee-joint, but without impairment of motion.

In another week my patient was ready for another debauch, and resumed his work as a painter on the 26th of April—two months and twelve days from date of injury.

The chief points of interest in this case, are: The slight character of the injury; the mischief caused by severe use of leg immediately after accident; the partial response to early treatment; the rekindling of inflammation from comparatively little motion in removing from one house to another; the futility of the after-treatment until the operation giving vent to accumulated pus followed by injection of synovial membrane and washing out its cavity with carbolic oil; the prompt arrest of suppurative action; relief of pain and constitutional disturbance; the rapid resolution following the use of carbolic oil; the ignoring of apparatus, and the resulting cure without deformity or impairment of motion.

Clinical Reports of the Philadelphia Hospitals.

Jefferson Medical College—Surgery. Reported by WM. MASON TURNER, M. D. Service of Prof. S. D. GROSS.

CASE I.—A boy, aged six, presenting at the inferior portion of the abdomen a red tumor of considerable size. A swollen condition of some dimensions could be seen around the parts. Below this red tumor, depressed and flattened, the head of the penis was discoverable; it had the appearance of being retracted slightly, and it could not be in a marked manner distinguished from the folds of the skin lying near.

With some difficulty, the testicles could be found.

Prof. Gross diagnosed the case, in the first place, to be eversion or extrophy of the bladder, particularly as orifices corresponding in situation to the mouths of the ureters, could be found, and as water, having the characteristics of urine, was constantly flowing over the red surface of the tumor.

To make a bad matter worse, a slight examination revealed the existence of a double inguinal hernia.

The anterior wall of the bladder was defective—this defect extending to the abdomen.

The pubic arch was likewise entirely wanting. Prof. Gross stated that this strange condition of the parts was congenital, and had not been occasioned by any extraneous cause. He likewise observed, that in the similar cases, on record, it had been noted, that it occurred far more frequently in males, than in females.

These cases, instead of being rare, as might commonly be supposed from the singular deformity, were quite common after all, Prof. Gross stating, that he, himself, had seen about twenty such cases, and in almost all of them, had found a single or double hernia existing. As a general thing the testicles are normal, though in some cases, they have been known not to descend into the scrotum. The man suffering from such an affliction is *by consequence*, rendered impotent, though *desire*, is often very intense and always normal. In females suffering thus, an atrophy of the clitoris, is almost always observable.

As regards the treatment in the case presented, nothing would be of absolute avail. Operations of various kinds, Prof. Gross remarked, had been performed, but while in most cases, the life of the patient had been hazarded, no corresponding benefit had been attained. Perhaps the operation of the English surgeon, Simon, of London, had been as satisfactory as any, but it was successful only to a limited extent; besides, Simon had endangered his patient's life to a great degree. His operation was to place the ureters so that they would open into the bowel.

Prof. Joseph Pancoast, of the Jefferson Medical College, once performed a different operation. It was on an old man, and consisted in endeavoring to cover the raw red surface with the subjacent healthy cuticle, as in other plastic operations. But the operation so far as result was concerned, was not a success, and the old patient eventually died of pneumonia.

Dr. Ayers, of Brooklyn, also performed the operation, and he claimed for it, *at first* considerable success; but finally it resulted like all others, in being only partly successful.

For the patient presented to the class by Dr. Gross, nothing was done in the way of operation at the time. We (Reporter) have not heard of it or seen it since.

CASE II.—A married woman, aged about thirty-eight, was presented, having a considerable enlargement of the right breast. Prof. Gross simply said it was a mammary tumor. It was quite

movable, showing that no adhesions of any importance were present.

The nipple was natural. The swelling was of about ten months duration, and had developed quite rapidly. The woman was in good health ; secretions natural, appetite good, could exercise to any extent without being fatigued ; regular in her catamenia and withal, quite cheerful. She suffered no pain whatever. Some months before, the tumor had been opened, and its contents evacuated.

This case could not be scirrhou, because the woman was not old enough. Prof. G. stated that should the tumor be removed it would most likely return. *Cystic* tumors are generally benign and do not return ; but this he thought was encephaloid in its character, and it would recur. Nevertheless, Prof. G. favored an operation at once ; but the woman declined.

CHONICLE OF MEDICAL SCIENCE.

REVIEW OF FRENCH MEDICAL LITERATURE.

BY DR. J. H. WIENDAHL, OF NEW ORLEANS.

Efficacy of Lactic Acid in Diphtheria.

DR. Bricheteau and M. Adrian having instituted a series of experiments in order to find the best solvant of the false membranes of diphtheria, have observed that the solution of lime water would completely and rapidly dissolve these morbid productions.

Next in order comes the solution of lactic acid, (lactic acid grs. xlvi—water f 3 xjx.)

We could then, according to the two observers, make use of lime water or of lactic acid to destroy the pseudo-membranes which constitute "l'angine couenneuse." We are not aware that lime has been employed, although seemingly preferable, but a practitioner of St. André de Cubzac, Dr. Dubreau, has communicated to the "Bulletin de Therapeutique," a note, in which he claims to have been successful in eleven cases with the solution of lactic acid. In four cases, the false membranes occupied the two tonsils, the velum palati, the pharynx and the whole of the posterior portion of the throat. In a child of eight years, they occupied also the nasal fossæ. There existed at the same time a painful tumefaction of the maxillary glands, fever and somnolency. In seven patients the tonsils of one only were covered with false membranes. In all the cases the treatment was limited to the saturation of the pseudo-membranous productions with the solution of lactic acid, by the means either of a pencil, or by injection

into the nasal fossæ. As early as the ensuing day the false membranes were completely detached and replaced by a semi-transparent whitish pellicle, and the patient could swallow broth. The treatment was kept up as long as there remained any small whitish points. The mucous membrane having assumed a uniform red color, mucilaginous gargles were ordered and the patient convalesced.

From these facts Dr. Dubreau concludes that lactic acid is an excellent topical application against false membranes. He adds, that being totally devoid of taste it is easily used with children; that it moreover admits of alimentation—and, finally, that if it does not act as a specific, it possesses by its speedy action the appreciable advantage of being able to ward off diphtheritic infections.—*Journal de Médecine et de Chirurgie*, December, 1868.

Observations on the Nature of Diphtheria, and the Treatment of that Disease by Sulphur: By DR. BONASTON, Physician of Epidemics at Montmoreau (Charente).

I

IN the month of December, 1867, I observed an epidemic of diphtheria which I treated with sulphur (an opiate, with unwashed flowers of sulphur two hundred grains, honey of roses one ounce).

This drug administered internally seemed possessed of a wonderful, if not real virtue.

I sent on the 23d of June, 1868, to the Academy of Medicine (Committee of Epidemics) the observations which I made at the bed-side. I do not publish the observations, but simply advance the reflections which have induced me to employ sulphur in diphtheria.

II.

Diphtheria is a disease of a general nature (*tolins substantiae*) because it is characterized by disseminated lesions (false membranes) which have the greatest analogy to leaves of a tree. These disseminated lesions denote an alteration of the blood. The false membranes select, almost always, the mucous membranes which are in direct contact with the inspired or expired air.

The false membranes are also primitively developed, but much more seldom, on solutions of continuity of the skin, that is, on the parts most accessible to the influence of atmospheric air.

The pseudo-membranes found on the respiratory surfaces attain a more thorough development. In diphtheria, what is the effect of atmospheric air upon the ulcerated skin, of inspired or expired air upon the respiratory mucous membrane, or upon the viscous mucosities which cover them?

This is an important question.

III.

It was impossible to establish the putrid, septic nature of diphtheria. However, the purely gratuitous affirmations, which at-

tribute as cause, some kind of infection, will probably for some time yet hold good. Humidity and vicissitudes of temperature influence ordinarily the development of diphtheria. This is an incontestable fact though not yet universally accepted. Certain diseases, such as catarrhal affections, articular rheumatism, endocarditis (diseases which are not of a putrid nature) have, etiologically, a great resemblance to diphtheria.

Finally it has been said that diphtheria was a specific inflammation. However, the word inflammation (the theoretical meaning attached to this word) has had its day; but the word specific disease will be yet shorter lived, for this expression puts off, but does not resolve the difficulties.

IV.

In diphtheria, in catarrhal affections, etc., etc., the intimate organization of the individual plays a great part.

Age, consanguinity or better parentage evidently exercise an incontestable influence. Influence of age conceded, diphtheria is almost a disease of childhood, as gout is that of the middle age. The chemical organization of the child seems to favor the alteration of the blood, which constitutes diphtheria.

The influence of parentage is equally manifest—in fact, in a house habited by several families, the brothers and the parents of the little children affected will successively come under its influence; whilst the children of another family, placed in the same centre and undergoing the same influence will escape the affection.

Are we not aware that in certain families, at long intervals, a diphtheria seems to be hereditary fatal?

V.

There is alteration of the blood in diphtheria.

The livid hue, so characteristic of the integuments, so manifest at the offset of the disease, indicates that the materials which constitutes blood in its physiological state do not exist in normal proportions.

There is a morbid fibrinogeny—*i. e.*, under the influence of temperature, of ambient air, fibrin—according to its individual aptitude, tends to coagulate and separate from the mass of the blood. In consequence of this evident modification, the fostering nutrient liquid of the economy is in conditions incompatible with life. This modification is soon manifested by troubles of innervation and by a more or less rapid asphyxia.

Long since, M. Roche has noticed a fact which can be ascertained. However repugnant it is to draw blood at the beginning of diphtheria, according to him, “blood drawn from the vein of a diphtheritic, becomes coated with an extremely thick couenne.”

Recently, MM. Millard and Peter have demonstrated a special alteration of the blood; they have published that the blood of the diphtheritic was muddy, and prune-colored.

There is no contradiction between the two different affirmations.

M. Roche examined the blood at the offset, when the morbid fibrinogeny was setting in, when the fibrin was undergoing a change, was coagulating; and MM. Millard and Peter examined the blood when the individual was dead and the blood was defibrinated.

There is no question in medicine more worthy of occupying the attention of the chemist and of the haematologist.

VI.

Diphtheria (in appearance at least) has some analogy to catarrhal diseases; like them it is subjected to the influence of parentage and may be even hereditary.

Even more; there is no diphtheria without a previous catarrh. To become convinced of this, it suffices to examine carefully the nose, the mouth, and the pharynx of children where viscous secretions will be always formed, which, under the influence of air, are transformed into pseudo-membranes, and will soon contribute, mechanically, to the destruction of the individual.

Diphtheria is of a catarrhal nature; it should then be effectively opposed by sulphur, whose anti-catarrhal properties are incontestable. Capuron, in 1812, employed sulphur with success (sulphuret of potassium) in a case of croup. The learned Hufeland, in Germany, has exalted sulphur in the treatment of diphtheria; he did not, however, give the views which justify its employment. Sulphur is a general excitant of the economy; it exercises a marked action upon the skin and the respiratory mucous membranes. Now, diphtheria, a disease so suddenly adynamic, usually affects the respiratory mucous membranes and the skin. Should sulphur be given internally? Should it be only used topically? Recently, Prof. Barbosa, of Lisbon, employed it topically. The animal economy comes rapidly under its influence, even when used externally. This fact should be remembered, in order to understand the happy results obtained by physicians who have used it topically. A physician of Dordogne, Dr. Count Lagantherie, administered it internally, giving a solution of the flowers of sulphur to a patient for the following reasoning: "The false membranes of croup resemble the oïdium of the vine; now, sulphur destroys the oïdium, therefore it should destroy the false membranes of croup."

The weak side of this reasoning is easily perceived. The importance of the false membranes should not be exaggerated; its fortuitous production constitutes a dangerous mechanical obstacle; but there is, before hand, a general affection against which sulphur, as a general stimulus, exercises an effective action, provided that the drug be used at the offset, and that the diphtheria be not too rapid.

Sulphur, in diphtheria, enjoys curative properties; but is especially a prophylactic drug. New researches made with sagacity are indispensable, in order to completely elucidate this question, which seems to me to be extremely worthy of attention.
—*Union Medicale*, 23 March, 1869.

Treatment of Diphteria by Cubebs: Communicated to the Society of Therapeutics, by CONSTANTIN PAUL.

Two years ago, a physician of la Sarthe, M. Trideau (d'Andouille) announced at Paris that he had cured twenty-six cases of diphtheria by means of the balsam of copaiva and cubebs. This success was very encouraging, and recently M. M. Bergeron and Labrie informed the Society of Hospitals that they had derived certain advantages from their use. They complained, however, of being annoyed by the repugnance which the children manifested in taking either the powder or the oleo-resinous extract of cubebs.

Having for ten years paid special attention to the preparation of cubebs, and having at hand a very fine extract of cubebs, obtained by M. Delpech, after the process of Dansse,—*i. e.*, by water, alcohol and ether—I awaited the occasion of testing the results of M. Tridean.

Last April I was called to fill the post of M. Bergeron at the hospital of Sainte-Eugénie, and an opportunity soon presented of treating diphtheritic affections. Success having crowned my efforts I am happy to make it known, as I am able to present to my medical brethren a far preferable manner of administering cubebs to preceding methods.

April 21—Louis Leon, a child, affected with chronic Pott's disease, is brought from the scrofulous section to the hall of acute diseases, for a diphtheric affection which had manifested itself on the previous evening. At my visit in the morning I found him with slight fever and moist skin. He has dyspnoea, particularly during inspiration, accompanied by a whistling sound like that of breaking glass. The expiration is easier, interrupted at times only by a cough of the same nature as that of the inspiration. The tonsils, habitually large, have increased, to the extent of completely closing the posterior portion of the throat and are coated with a thick, tenacious pseudo-membrane of the color of frangipani. The false membrane covers the anterior portion of the two tonsils and of the uvula. The isthmus of the fauces, being completely obstructed, hides the pharynx from view. One of the lymphatic ganglions is swollen at the two angles of the inferior maxillary. The anterior nasal fossæ are free from all exudations.

The peculiar character of inspiration and expiration and the complete aphonia, predisposes us to fear laryngeal complication; however, as yet, there is no asphyxia: the lips are rosy and the eyes slightly injected. The child has not as yet had a paroxysm of suffocation.

Upon auscultation, we discover a weak respiration, without vesicular murmur,—the extensive laryngeal hissing is the only appreciable sound. Upon percussion, the resonance is good. Pulse. 144; temperature, per rectum, $40^{\circ}2$.

After having cauterized the throat with perchloride of iron, I prescribed the extract of cubebs of M. Delpech, in the following proportions:

R.	Extract of cubeb, by water, alcohol and ether, a a.....one part.
	Powder of sugar.....seven parts.
"	gum.....two parts.

Each teaspoonful of this powder, weighing thirty-eight grains, contains, consequently, three and a half grains of the extract. The child takes, the first day, four teaspoonfuls—say fourteen grains per day of the extract. To administer this powder, it suffices to dissolve a teaspoonful into two or three spoonfuls of water. We thus obtain a slightly liquid mixture, having the odor somewhat of mint. Children take it readily.

During the day the child was tolerably easy, respiration less heaving; the voice is still extinct; pulse 128; temperature 39°.6.

On the twenty-second, morning visit, the dyspnœa has increased; the laryngeal hissing accompanies both movements of respiration; the cough is more muffled and hissing; the dyspnœa is accompanied by a dragging action above the sternum and beneath the false ribs; the asphyxia is more manifest; there exists violet spots upon the cheeks; the eyes are injected and the temporal veins swollen; the false membranes of the throat are softer and grayer than on the preceding day; the pharynx, of which we can only at times catch the sight, is coated with false membranes;; a paroxysm of suffocation has occurred during the night; pulse 144; temperature 40°. We prescribe anew—150 grains of the mixture of cubeb.

At night the respiration is much more free; the cough is less hissing and begins to take the catarrhal stamp; the child is much easier; pulse 124; temperature 40°.

23d.—The symptoms still improve; pulse 104; temperature 38°.2; same treatment.

At night the skin is cool, there is a perfect calm,—the voice is, however, yet stifled; pulse 104; temperature 37°.6.

24th.—The false membranes have nearly entirely disappeared on the tonsils; pulse 100; temperature 37°.8; same treatment. One hour after the visit, the child is taken with one or two paroxysms of violent suffocation, which yielded by noon.

At five P. M. the respiration is sufficiently easy, but the cough is quite broken and dry; pulse, 108; temperature, 37°.8.

25th.—The false membranes are still lessening; pulse 88; temperature 37°.4. The dose of cubeb is increased, through fear of the return of the paroxysms of suffocation: saccharate of cubeb, 331 grains.

At night, same state of things; pulse 120; temperature 37°.8.

26th.—Absence of false membranes upon tonsils and pharynx; those organs are, however, still red and tumefied. The respiration is calm and silent; the cough is rough, but more sonorous than the day preceding; the voice remains extinct; pulse 108; temperature 37°.6.

At night, same state; pulse 112; temperature 37°.6.

On the 26th we begin to nourish the child, and we add syrup of peruvian bark to the prescription. Pulse 92; temperature, 37°.6. At night, pulse 104; temperature 37°.8.

27th.—The child has had diarrhoea yesterday during the day ; it still keeps up a little this morning. The cough has become entirely catarrhal ; the child is not aphonic, but the voice is still inaudible ; respiration is free, and the throat has resumed almost a normal state. I infer that the aphonia is due to a paralysis of the vocal cords, and this supposition is more striking as we have present a certain paresis of the pharynx and of the velum palati. We reduce the dose of the saccharate to 152 grs. Pulse 108; temperature 37°.8. At night, pulse 104; temperature 37°.8.

On the 29th, the general state of the child is excellent ; the tonsils, completely freed of false membranes, are rosy ; the inferior portion of the pharynx is only slightly pale ; deglutition is easy. The cough is loose and truly catarrhal ; aphonia is the only remaining symptom ; the diarrhoea has yielded ; the child has appetite ; pulse 100; temperature 38°.6. At night, pulse 120; temperature 28°.0.

On the 30th, the child is convalescent ; pulse 116; temperature 37°.8.

This case presents many points of interest, but we will only examine it in its therapeutical relation. At the offset, the affection was very grave ; the thick pseudo-membranes covered every portion of the isthmus of the throat ; the sub-maxillary ganglia were implicated ; the fever was intense and the prostration profound. Moreover, the larynx was involved. The day following its admission, the paroxysms of suffocation were so alarming as to have demanded tracheotomy, if a certain amount of hope of seeing the affection yield through the influence of the cubebas had not led us to temporize. We should make mention that at the greatest intensity of the disease the child seemed at two intervals to manifest great improvement after the administration of the mixture. The mode of administration was very simple—to put a small amount of sugar in a small amount of water is an easy matter ; and the medicine presented in this guise was agreeably received by the child.

At the end, the drug produced no bad consequences, save a slight diarrhoea. Let us mention also, that we did not observe at the eighth day the exanthema proper to cubebas, as observed by M. Trideau, although his doses were smaller than ours.

Finally, we hold as precious a drug, which is able to oppose so terrible a disease. It seems to afford some hope, and should its favorable action maintain itself, M. Trideau will have rendered a great service to therapeutics.—*Gazette Medicale de Paris*, March 6th, 1869.

Fibrous Tumor of the Uterus Complicating Pregnancy. By DR. F. DE RANSE.

AT a late meeting of the Imperial Chirurgical Society of Paris, M. Blot detailed the history of three cases of the above which he had observed. The first was in 1856, when he was chief of the clinic of Prof. P. Dubois. It relates to a woman of Argentine, who, being at her full term of pregnancy, was taken with labor-pains on the 30th of November, 1856. A midwife being with her, and having patiently waited the termination of the labor, dilatation being complete and the membranes ruptured, sought in vain to make out the presentation. Soon the head of the foetus appeared at the vulva. The midwife hastily called in a physician who fruitlessly attempted to produce version. A second physician was as unsuccessful. She was then taken to Paris. She entered the hospital of clinics on the evening of the 1st of December. M. P. Dubois, who was immediately called to her side, found her very gravely ill, the child being dead, the cord hanging out of the vulva, and also the head and fore-arm of the child. From examination, M. P. Dubois at first thought that there existed considerable narrowing of the pelvis, as palpation of the abdomen did not lead to the cognizance of a uterine tumor. The patient being placed under a deep anæsthetic sleep, MM. Dubois and Blot made two unsuccessful attempts at version.

The following day, after a bath and bleeding, new efforts at version without success. Nevertheless, M. Depaul, who assisted at this visit, succeeded in bringing a foot out of the vulva. In making tractions by this foot, the rest of the foetus was extracted, with very great difficulty. The head presented considerable flattening. At the escape of the head, Mr. Blot felt a movement, as if it had just passed from notably retracted points of the pelvis.

The patient died on the next day after having had a chill, an intense fever and greenish vomitings.

The autopsy exposed at the surface of the uterine globe and in the thickness of its tissue, the presence of several tumors of different volumes, one of which, had a pedicle of one and a half to two inches in length, which seemed to be retained in the pelvic excavation and filled the utero-rectal cul de sac, to which it adhered by extremely resistant fibro-cellular tracts. In the other cases observed by M. Blot, the termination was different.

One is relative to a patient of M. Hugnier, to whom this surgeon called MM. Blot and Pajot in consultation, in December, 1867. This lady, aged from thirty to thirty-five, was in her first pregnancy, having attained the seventh month of gestation. She had about twelve fibrous tumors which could be felt through the abdominal parietes, and one of these completely filled the pelvic excavation, being wedged in so that it was impossible to move it. The neck of the uterus was flattened between the symphysis pubis and the tumor.

M. Hugnier was desirous of obtaining the opinion of his consulting brethren with regard to the necessity of producing premature labor. MM. Pajot and Blot thought, that in the existing state of things, nothing was to be done, and that they should await the modifications which the natural evolution of gestation would bring in the uterus and in the tumors.

At a subsequent consultation three weeks later, MM. Hugnier, Blot and Pajot, found that, consequent to the natural development of the uterus and its ascension into the abdominal cavity, the tumor contained in the pelvic excavation had ascended and liberated this cavity sufficiently to enable the finger to reach and feel a small portion of the foetal head. In the present state, nothing was to be done, but to continue the expectant plan.

The confinement, which took place on the 28th of February, 1868, showed that the surface of the head accessible to the finger, had greatly increased. Labor progressed naturally and the uterine contractions served to expel the tumor more and more from the pelvic excavation and to liberate it. After the rupture of the membranes, the head adapted itself to the superior strait; the tumor still ascended, but slowly. Finally, at nine A. M., M. Blot terminated the labor by applying the forceps at the superior strait. Since then, M. Blot has several times seen the mother and child, who are in the enjoyment of the best of health.

Last July, M. Blot was called to a patient of M. Homalle, aged 35 years, affected with inflammation of the uterus. This lady, pregnant about two or three months, had a fibrous tumor which filled the pelvic excavation, and which flattened the uterine neck against the symphysis pubis. This tumor simulated greatly a retroflexion.

Inflammatory accidents having been overcome, the pregnancy pursued a natural course. M. Blot has been informed by M. Homolle, that the labor terminated naturally. By the developing influence of the uterus throughout the progress of gestation, and the ascension of this organ in the abdominal cavity, under the influence of uterine contractions during the travail of labor, the tumor rose above the superior strait, and freeing the excavation, allowed the extraction of a living and healthy child.

The cause of the happy termination of the two last cases, and the sad issue of the first, depended in relation to the first, upon the fact that fibro-cellular tracts had fastened down the tumor in the pelvic excavation, and prevented it from rising above the superior strait, whilst in the two cases which terminated favorably this complication was wanting.

In relation to the influence of pregnancy upon the development of fibrous tumors of the uterus, M. Blot, without being positive, is of the opinion that these tumors increase in volume during gestation and diminish after confinement. In the cases which he has observed, it seemed that the tumors had perceptibly diminished to about the third of their volume after labor.

In conclusion, according to M. Blot, there exists no general law of guidance in such cases. Nevertheless, let it be said, that in many cases, delivery can take place without very great difficulties, when no fibrous tracts exist between the tumor and the organs contained in the pelvic excavation. When these adhesions exist, there is no possibility of bringing forth a living child; and the mother is equally often a victim of this sad complication which it is unhappily impossible to make out before hand.—*L'Union Medicale*, February 16, 1869.

We here append a synopsis of the discussions of the Chirurgical Society of Paris relative to fibrous tumors of the uterus, the consideration of which important subject has occupied the serious attention of that learned body for the past six months. The points principally discussed are the influence of uterine fibrous tumors upon pregnancy and labor, and the reciprocal modifications experienced during the development of the gravid uterus. The discussion had for a starting point the following interesting observation of M. Guéniot:

A lady, aged forty, became pregnant eighteen years after her first confinement. Towards her seventh month of gestation, M. Gueinot, discovered the presence of several small fibrous tumors, movable and hard, perceptible by abdominal palpation, and a larger tumor of the same class, but very voluminous, probably implanted posteriorly to the union of the neck and body of the uterus, and filling very nearly the whole space of the inferior strait.

MM. Depaul and Tarnier being consulted, decided with M. Gueinot, to await the completion of gestation, and if any change should take place, either in the consistence or position of the tumor, to have recourse to the cæsarian section.

Labor coming on in due time, the tumor glided above and posteriorly, whilst the head of the foetus descended behind the pubis. After throes of fourteen hours, the head being in the inferior strait, M. Guéniot applied the forceps and extracted a child in perfect health. The patient, with most careful nursing, recovered completely. The fibrous tumors resumed their place and filled the space which they previously occupied.

Two orders of consideration arise from this fact: 1st. The possibility of spontaneous delivery in consequence of the ascension of the tumor during the labor. 2d. The absence of modifications impressed upon the tumor by gestation. It is on these two points that the discussion bore particularly.

Relatively to the first point, the members who took part in the discussion agreed.

But to what extent can we rely upon spontaneous delivery. In what proportion, bearing in mind a certain number of cases of fibrous tumors complicating pregnancy, does this happy result take place? We will, to answer the question, produce the follow-statistics, borrowed from the arguments of M. Tarnier.

In forty-two cases—

Labor was spontaneous eight times; six women got well, one died, and it is not known what became of the other; three children were born alive, three were stillborn, of the others nothing is known.

Six times dilatation being made, and the tumor being but partially pushed above the superior strait, the forceps wire applied: two women got well, four died; two children were born alive and four stillborn.

Version was performed six times: two women got well, three died, one result unknown; three living children, three stillborn.

Premature labor was produced once, at seven and a half months gestation: the mother got well, the child died.

Embryotomy was performed once: the multilatation of the child did not save the mother.

The tumor was enucleated once: both mother and child died.

Caesarian operation was performed fourteen times; twelve women died, two got well; nine children were extracted alive, two died. The fate of the three others is not known. Five times the women died in labor.

In conclusion, in the forty-two cases we count—on the mothers side, twenty-seven deaths, thirteen recoveries, two unknown results; on the childrens side, fifteen living children, twenty stillborn, of seven the fate is ignored.

On the second point, opinions were divided—*i. e.*, upon the modifications which the development of the gravid uterus exercise upon fibrous tumors. The prevailing opinion was that under the influence of gestation these tumors become hypertrophied and soften. There are facts which go to show that such is the case, but other facts are contradictory. The part due to the influence of pregnancy in the hypertrophy and softening of fibrous tumors, does not yet seem to us to be clearly settled by discussion. The influence of the degree of vascularity of these tumors was not probably borne in mind.

This question of the vascularity of fibrous tumors of the womb had already a few months ago been brought up before the Society of Surgery. Affirmatively decided by some it was negatived by others; it is of much importance in the actual debate. We, indeed, easily comprehend that a vascular tumor participates in the augmentative nutritive activity of the organ upon which it is implanted, and in consequence of these modifications in its nutrition, it undergoes a process of hypertrophy and of softening. But it is more difficult to admit such a relation between the uterus and a fibrome lacking vessels.

On the other side, as observed M. Guéniot, rapid hypertrophy and softening of fibrous tumors of the uterus is observed as well in its state of vacuity as in its gravid state. Moreover, their consecutive atrophy was also established as occurring in both conditions. In support of the influence, that gestation would pro-

duce upon the hypertrophy and softening of these tumors, the alleged effect of menstruation was adduced. It is probable that the increase of the volume of the whole womb, resulting from menstrual congestion, was taken for an increase of the volume of the fibrome. This congestion, in fact, especially when there exists a fibrous tumor, may be considerable and give an unusual development to the uterus. An analogous result can even be observed in women who have passed the age of menopausis. In this case we sometimes observe the presence of a fibrome in the womb, producing, in an intermittent manner, very intense congestive phenomena, which augment the volume of the uterus to twice or thrice its normal size. This, however, passes off without haemorrhage, producing only a more or less abundant leucorrhœal flow.

In conclusion, the prevailing opinion which admits of the direct influence of pregnancy upon the hypertrophy and softening of uterine fibromes, is justifiable in particular cases, but cannot be considered established as a fact or general law.—*Weekly Review Gazette Medicale*, March 13th, 1869.

Medical Clinic on a Case of Hæmorrhage of the Annular Protuberance, with Albuminuria and accompanied with symptoms simulating those of Uræmia.—Integrity of the Substance of the Kidneys.—Several Pathological considerations on albuminuria and dyspnea. Read before the Medical Society Hospitals, January 8th, 1869. By Dr. DESNOS, Physician to the Hospital of St. Antoine.

GENTLEMEN:—About two months ago (26th of October) when yet attached to the Hospital of the Incurables, at the hour of visit, the interne of my service informed me that the previous evening, about ten o'clock, he had been hastily summoned to one of the inmates, whom he found walking in the parlor in expressible agitation, having, however, full possession of his intelligence. Affirming that at night, being in good health, he had eaten his supper as usual, had gone to bed and slept well, when of a sudden he had been aroused from sleep and driven from his bed by anxiety and a horrible sensation of suffocation, which increased every moment. In a word, he seemed to be under the influence of a dreadful paroxysm of asthma, which manifested itself by intense dyspnœa, and by the numerous dry and hurried rales which auscultation discovered through the whole extent of both lungs. The face was deeply congested. On account of his agitated state he was with difficulty transported to the infirmary. Application of sinapisms to the front of the chest and to the inferior extremities produced considerable alleviation of symptoms, but only for a short time. Scarcely had a potion of two drachms of the syrup of belladonna and ten drops of ether been administered,

when the symptoms above mentioned assumed a still graver character. The orthopnoea still increased ; liquid matters were thrown up from the stomach ; trismus took place and the patient became comatosed.

I immediately relieved the mind of the interne relative to the supposition that the administration of the belladonna could have contributed somewhat in the bringing on of this sad termination of the thoracic accidents, representing to him that on account of the very small dose which had been administered one could not see, between its injection and the explosion of the cerebral symptoms, but a relation of pure coincidence ; while the contracted state of the pupils authorized us more and more to reject the supposition of poisoning by belladonna.

The patient, aged seventy years, of a robust constitution, presented a perfect type of the comatosed state. Completely unconscious of what took place around him ; speechless ; the face turgescent and swollen ; the features inert and without change ; the integuments of the neck of intense redness ; the jugular veins swollen with blood, he laid on the back in complete immobility. His superior as well as inferior extremities, when raised from the bed, fell as inert masses. However, when sharply irritated, slight motion was produced. Finally, the symptoms seemed to be more the result of a general resolution of the vital forces connected with the abolition of the intellectual faculties, than of a paralytic stroke. Respiration, ample, difficult and stertorous, was heard at a distance. The pulse, quite large, was neither accelerated nor lessened—it kept up its normal rhythm.

These symptoms represented the comatosed conditions of uremia. I extracted some urine in order to question its chemical components. The action of heat and azotic acid showed the presence of a great amount of albumen.

Undoubtedly, this man having albuminuria was suffering from complications connected with the retention of the blood of the products of effete materials, which the urinary organs should incessantly eliminate. This retention may have been of a longer or more recent date. For twelve hours we were enabled to observe in him the development of the series of the principal forms of uremia. From its relatively rare form, the exceptionally acute one, which had opened the morbid scene, to the dyspnœic form, which, through the labors of the Society of Hospitals, has definitely won its place in the nosological tablets, then to the comatose type.

The albuminuria complicated with uremia, I attributed to an acute or chronic lesion of the kidneys, to Bright's disease. The idea of an albuminuria connected with a lesion of the encephalon, and which I had kept in mind in considering the diagnosis, had only made a passing impression. I had rejected it, remembering that I had read that, in the albuminuræ depending upon an affection of the nervous system, albumen passes but in small quantity by the urine. Nor was absence of localized paralysis

likely to lead me to this hypothesis. The patient did not present a single trace of oedema in any part of his body. We know that the forms of Bright's disease, exempt from anasarca, are not less liable than others to the explosion of the uremic phenomena.

It is true, we were ignorant of the cause of this Bright's disease. We knew little of the history of this man, admitted only a few days in the house. We had heard that he had inaugurated his admittance in the establishment by a few scenes of intoxication. We were then apt to suspect the alcoholic habit, which is often the origin of renal degeneration. Our diagnosis was also quite formal: *Bright's disease with uremia*. The patient died in the evening, seventy-two hours after our visit, twenty-four hours after the attack.

At the autopsy our first care was to examine the kidneys, to find the confirmation of a diagnosis which we thought so surely and so duly established. I avow that I was deeply disappointed. The two kidneys in their external as well as internal appearance were healthy.

Microscopic analysis showed a few epithelial desquamations, due to the passage of the albumen in the urine. Sad resource, and which could not satisfy my mind. I was compelled to return to the hypothesis which I had at first rejected, and to seek in the encephalon for the explanation of the cerebral symptoms as well as for the albuminuria. The cranium being opened all the parts of the encephalic substance, of which most of the arteries and arterioles had undergone an atheromatous degeneration, presented their normal constitution, with the exception, however, of the coats which form the postero-superior half of the annular protuberance. In this we found an haemorrhagic nidus of the size of a small nut containing, besides liquid blood, a small black clot of the size of a pea which had forced itself through a fissure or the floor of the fourth ventricle.

The organs contained in the abdominal and thoracic cavities, including the ureters, the bladder, the canal of the urethra, as well as the heart and pulmonary artery, were healthy. The two lungs were alone congested in all their extent, especially in their posterior part.

Thus there was no foundation for the supposition of Bright's disease starting from uremia. We had left but the haemorrhage of the mesocephale to explain the cerebral symptoms and the albuminuria.

I had committed a mistake, which I must admit without remorse and without regret—without remorse because the error could be of no injury. Whatever was the cause of the symptoms observed, the state of the patient furnished data of a commanding nature to which therapeutics was bound to submit.

The robust condition, the coloration and turgescence of the face, and of the veins of the neck, the state of the pulse, the coma, demanded blood-letting as well as revulsives to the ex-

tremities and diffusible stimulants, whilst the state of the respiration called for energetic action towards the integuments of the thorax. Leeches were applied to the mastoid apophyses; bleeding was practiced at the arm; a large blister was applied in front of the chest; the inferior extremities were irritated by sinapisms; a portion of spiritus mindererus was administered. In spite of all the man died. The treatment was powerless to prevent the fatal issue, it did not hasten it. There is some cause to think that it contributed to retard it.

Without regret, I reiterate, because if I do not deceive myself, my error was supported by a certain number of attenuating circumstances, for I do not know, if finding myself in the same cathegory, after the lesson which I have received, whether I would succeed in avoiding the result.

The absence of localized paralysis, contributed we have said, to cause us to reject the existence of the encephalic trouble, and was calculated to have inclined us the more to the idea of the existence of uremia. Localized paralysis should not, in fact, appear amongst the number of functional disturbances, which the retention in the blood of excremential products can generate, and if on the contrary, we had met with localized paralysis of one of the inferior or superior members, or of an hemiplegia; we should have been led to suppose a lesion of the encephalon, *a fotori*, if the paralysis had had its seat on one of the sides of the cheeks and upon the limbs of the opposite side, we should have pointed out still more the seat of the lesion towards the seat of the mesocephale with predominance in one of the sides of this organ. You have seen that this means of making out the diagnosis was wanting.

I will only mention the symptom of ammoniacal expiration. I do not attach much importance to it, as it is quite uncertain.

Could the urinary secretion, examined with regard to its quantity, to its physical and chemical qualities, have furnished us with useful data?

The microscopic examination of the urine, if it had been practiced, would have shown the presence or absence of fibrous cylinders. Would it have sufficed to establish the existence of an affection of the kidney having uremia as a result? We do not believe so. Fibrinous cylinders are often, it is true, found with epithelial desquamations, which can be carried along by any modification in the hydraulic pressure of the renal circulation. I acknowledge, that by its mechanism, an albuminuria produced by a lesion of the annular protuberance belongs to the class of albuminuria connected with the influence of the pressure of the blood. We could not then have derived much profit from this investigation.

In drawing off the urine I was not only influenced by a desire to procure a means of facilitating the diagnosis, I had also fulfilled an urgent indication. The bladder, as demonstrated

by the exploration of the hypogastric region, was distended with a very great quantity of urine.

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To my great regret, sugar was not sought for during the life of the patient; as after death not a drop of urine was obtained from the bladder, on account of the incontinence during the last hours of life. *A priori*, we are struck by the reflection that the extension of the same lesion of the protuberance which made irruption towards the floor of the fourth ventricle, and which, at a certain point had determined the passage of albumen, could also have produced glycosuria, and that, consequently, if an analysis made during life had revealed the presence of sugar, we would naturally have been led to abandon the hypothesis of a renal lesion with uræmia, and to suspect a lesion of the protuberance. The regret which this deficiency in our observation may cause, will be greatly lessened if we remember that as a cachectic type of disease, diabetes, at a certain period, can be complicated with Bright's disease, and that, in the absence of antecedent data concerning our patient, the notion of glycosuria would have afforded but little if any aid.

I conclude by saying that, in the case which now occupies our attention, or in all other cases of lesion of the mesocephale producing, with albuminuria, only coma, only a state of general failure of vital force, without localized paralysis, no means can enable us to diagnose a lesion of the annular protuberance, to the exclusion of Bright's disease and of uræmia, outside of densimetric examination of the urine or of a quantitative analysis, an application always quite difficult, at times impossible.

Twenty years have almost elapsed (1849) since M. Claude Bernard, in one of his labors which inaugurated the epoch of his celebrity, entertaining the Academy of Sciences upon the influence of the nervous system on the composition of the urine, announced that whilst the irritation of the fourth ventricle, at a given point, produced sugar in the urine, the wounding of the same organ in a point situated a little higher and equally determined, provoked albuminuria, these two normal secretions being both accompanied with polyuria. By induction, this physiological result led to the conclusion that lesions of the fourth ventricle and of the protuberance would produce an albuminous state of the urine, and also polyuria. Then—leaving out of consideration the clinical interest that the diagnostic difficulties produced by certain alterations of the mesocephale can offer, difficulties which I have endeavored to point out—is it not wonderful, in the light of medical experimentation, to observe this pathological fact, realizing in man, under the double relation of albuminuria and the augmentation of the urinary secretion, an hypothesis founded upon experiments instituted on animals. More complete anatomical and physiological views enable us to furnish explanations of these apparent strange phenomena.

As observed by my learned friend, Dr. Jaconet, the vaso-motor

nerves of the organism meet in the portion of the medullary substance which corresponds to the fourth ventricle. When the precise point to which those of the spine lead is affected, there results, if the lesion (such, for example, as an hæmorrhagic focus) has produced their destruction, a paralytic dilatation of these vessels. This causes the afflux, in a given time, of a greater quantity of blood toward these organs, and a polyuria and an albuminuria appertaining to the class of albuminuriæ, produced by modification of the hydraulic conditions of the renal circulation is the result.

In albuminuria, produced by lesion of the annular protuberance, it would not perhaps be unreasonable to connect, in a pathological view of physiology, the respiratory disorders observed during life and the pulmonary lesions established at the post-mortem.

If it be true that the apparent origin of the pneumo-gastric roots are found towards the sides of the rachidian-bulb, it is equally true—as we are instructed by the researches of our college Professor, Vulpian—that such is not their true origin. Penetrating into the bulb, the radicular fibres of this nerve divide themselves into several fasiculi, which take diverse directions. One of these fasiculi directs itself towards the brain in passing across the protuberance. Amongst the disorders produced by the apoplexy of the mesocephale it was destroyed. Does it not then seem, so far as the disorders of the respiratory functions are concerned, that we have before us one of those instances of experimental dyspncea, followed by more or less deep-seated lesions of the lung? Is it not similar to one of those vivisections (the section of the pneumo-gastric, in other words, the paralysis of its peripheral end) produces after a certain time, and with a greater or less rapidity, according as the section be simple or double, the death of animals, in the lung of which pulmonary congestions, amounting even to apoplexy are found at the autopsy with a great amount of secretion of bronchial mucosity.

If, in our patient, we found but a simple pulmonary congestion, it is because death supervened too suddenly to allow the lesions to become more deeply seated.

In want of other merit, my observation will probably have that of variety. The application to pathology of the physiological experience of Claude Bernard, has been slow in being realized; not that, without doubt, a certain number of facts analogous to the one which I have just related have been wanting, but through neglect of being published. Among the numerous observations, which O. Larcher, has selected for the writing of an important work on the pathology of the annular protuberance, he has found but one example of albnminuria produced from alteration of the mesocephale.

Personal researches sufficiently multiplied have enabled me to find but one, and this is due to M. Gubler.—*Union Médicale, February, 1869.*

ANATOMY, PHYSIOLOGY AND PATHOLOGY.

COLLATED BY W. S. MITCHELL, M. D., PROF. OF ANATOMY, AND OPHTHALMIC MEDICINE AND SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Lesions of the Brain.

THE advocates of the localization of the faculty of speech in some one particular part or region of the brain, are not left in quiet possession of their hypothesis. The subject, which has been much discussed at the Medical Society of London during the present session, came up again on Monday evening last, when Dr. Day of Stafford, read an admirable practical paper on the consequence of lesions of the brain from wounds and from disease. In one case recorded by the author, a man, who had met an accident from the explosion of a gun, had the breech of the gun lodged in the brain. He carried the breech for months, walking from Walsall to Newcastle on-Tyne and back again in search of work, and showing no evidence of special cerebral disease. After the death of this man (he died in the Stafford gaol,) the breech of the gun was removed from the brain. The discussion which ensued was remarkable for the extreme difference of view held by various speakers respecting the consequences of cerebral lesion.—*Lancet.*

Three remarkable cases of arrest of Development of the Eye, occurring in the same family.

IN a family residing in one of our neighboring towns, three very remarkable cases of arrest of development of the eye have occurred. Besides the father and mother, the family consists of nine children. The youngest, a baby of a week old, was born with the left eye only about half developed—presenting the appearance that is often found in an eye which has been destroyed through the agency of a large ulcer of the cornea. It is about half the usual size, with a central opacity, the cornea being partly formed, and the iris can be distinguished, though smaller than normal. No pupil can be discovered. The other eye is perfectly formed. The second case is a boy of seven years of age, whose right eye is only partially formed, presenting a similar appearance to the first. In the last case, a boy of fourteen, the right eye has wholly disappeared, there being nothing in the socket but the conjunctiva, which lines the cavity. The left eye presents nothing abnormal. The children are all healthy and robust. Nothing of a similar nature has been known to exist in any of the ancestors. The father and mother have perfectly formed eyes.

Thinking these cases might be interesting to the readers of the

Journal, and having never seen similar ones spoken of in works on the eye, I thought them worth reporting.—G. E. H.—*Boston Medical and Surgical Journal*.

[In the year 1858, the writer saw a negro child, about six years old, on a plantation in Adams County, Miss., with total congenital absence of both visual organs. It was, in other respects, perfectly developed and healthy. The palpebral fissures existed in a rudimentary state, about half an inch in length, and could be opened about one-fourth of an inch in depth. S. S. H.]

The Influence of Nervous Power in controlling the Temperature of the Body: By Assistant Surgeon ALCOCK, 35th Regiment.

STARTING with the theory that "the blood itself is the seat of those chemical changes that develop force in the body," the author alluded to the mechanical part played in the development of heat by the dilatation or contraction of the capillaries.

To exemplify the direct influence of the nervous centres over the metamorphosis of tissues, he instanced the six-fold increase of urea in the urine of the rutting ram, as noted by Professor Haughton.

He then reasoned that praeternatural heat was the result of three conditions—suspension or exhaustion of the functions of the sympathetic, diminished nutrition and increased metamorphosis—but he believed the second and third to be consequences of the first, and brought forward heat apoplexy as a disease in every way typical of an exhausted sympathetic; in support of which he showed that in ten out of eleven cases of this affection which occurred in the 35th Regiment, in Mooltan, there was a distinct history of previous nervous exhaustion from fatigue, intemperance or disease. In conclusion, he laid before the meeting the thermometric record of a case, in his own practice in India, in which uterine haemorrhage caused temporary paralysis of the right half of the body, with lowering of the temperature of that side. Fever supervened, and then the temperature on the paralyzed side rose considerably above even the fever heat shown on the sound side.—*Medical Press and Circular*.

Indirect Osteoplasty.

PROF. Billroth, in a contribution on the results of operative proceedings for favoring the regeneration of bone from periosteum, states that, in diseased conditions of the full grown hollow bones of adult subjects, the periosteum resembles that found in early life, in being lined by a layer of cells which may be converted into irregular and luxuriant masses of osseous tissue. This pro-

cess is observed in cases of ostitis and acute periostitis, particularly in syphilitic subjects,¹ in whom there is a great tendency to the formation of osteophytic growths. The sanguine expectations with which periosteal osteoplastic operations were undertaken have not, however, been fulfilled. In the first place, the surgeon has no power to limit or control the abundant formation of bone-cells from diseased periosteum; and, again, the newly formed bone after a time contracts like other regenerated connective tissue, and finally wholly disappears. Artificial osteogenesis may be produced in children, after resection, when the wound heals by primary intention; but it fails in adults, and when the wound remains open for some time, with profuse suppuration. Rhinoplastic operations, in which flaps of periosteum had been detached from the frontal bone, though followed by formation of osseous tissue in the new nose, were ultimately unsatisfactory in their results, in consequence of the absorption of this tissue, and of the formation of an immoveable and tense cicatrix on the forehead. The transplanting of periosteal flaps in operations for cleft palate is not approved of by Billroth, in consequence of the great difficulty of the proceeding, and of its slight utility. In cases of necrosis of the gums from phosphorus-poisoning, success has frequently attended periosteal resection when the formation of new bone was not prevented through profuse suppuration. The formation of a perfect maxillary bone must not be expected: in regeneration of the upper jaw, the antrum is lost, the bone itself is flattened, and the cheek sunken. In resection of joints, periosteal operations, in consequence of the softened and relaxed condition of the membrane, have not resulted in marked success, except in a few cases, in which they were practiced on young subjects, and where healing was perfected without severe symptoms.—*Allgemeine Wiener Medizinische Zeitung*, No. 49, 1868.

The Pons Varolii the Nervous Centre of General Conclusions.

H. NOTHNAGEL, in a series of experiments detailed in *Virchow's Archives*, and translated for the *Cincinnati Medical Repertory*, has demonstrated that it is incorrect to say that irritation of the "floor of the fourth ventricle" produces convulsions, as such a result follows irritation of only a limited portion of that region. This limited portion, in general terms, corresponds to the *locus ceruleus* and those parts of the floor of the ventricle external to the *eminentia teretes*, from a little below the *corpora quadrigemina* to the upper part of the *alæ cinereæ*. That this part of the medulla oblongata is not the centre of convulsions, but that they arise from reflex action, was shown by the absence of all convulsions when irritation of the parts was preceded by division of the medulla just below the pons. The nervous centre of general

convulsions must then exist above the division, and to demonstrate its exact locality he divided the medulla at various points. When the section was too near the nuclei of the vagi, death was instantaneous; when higher up, even to the lower border of the pons, though short contractions occurred at the moment of division, the animals afterwards lay quietly without the least movement, death taking place in a quarter or half an hour; when, however, a portion of the pons was left attached to the medulla, the most violent general epileptiform convulsions set in simultaneously with the section, and persisted till death. The conclusions justified by the experiments are these: The centre of general convulsions is situated in the substance of the pons. Its lower boundary corresponds to a section at the height of the inferior border of the pons. The faculty to perform the function of a centre of spasms is to be denied to the substance of the medulla oblongata.—*Pacific Medical and Surgical Journal.*

Cohnheim's recent Researches.

THE accuracy of the researches of Cohnheim, anticipated by Waller, has been called in question by Dr. Koloman Balogh, who, together with another experimenter, Dr. Csabatamy, failed to detect anything like the passage of white corpuscles through the walls of the capillaries in the mesentery of frogs poisoned by curare and other powerful agents of a similar character. Dr. Balogh states that he has repeatedly seen the white cells of the blood mass together, but not a single cell pass through the vascular walls. He is of opinion that Cohnheim has been the victim of an optical error. He affirms, moreover, that the origin of pus-cells is not the white blood-corpuscles, but the cells of the connective tissue, including, of course, those found in the walls of the vessels. Balogh does not deny the existence of openings in the capillaries; but he declares that they are infinitely minute, if they exist at all. He thinks his negative result sufficient to throw grave doubt upon Cohnheim's observations.—*Lancet.*

The influence of Irritation on the Nerves of the Skin upon the Temperature of the Limbs.

MM. Brown-Séquard and Lombard publish in the *Arch. de Phys. Norm. et Path.*, p. 688, the first results of some experiments instituted by them to determine the effect of irritation of the nerves of the skin upon the temperature of the limbs. They experimented upon each other. Being seated quietly in a room of steady temperature, one of them was pinched in some part of a limb a few moments after placing upon the same limb, or the opposite one, a thermo-electric pile, and the establishment of equilibrium

judged of by the steadiness of the flame at the zero of the scale. Suppose the pile was placed on the left fore-arm; now, pinching the skin somewhere on the hand forearm, arm, shoulder, or even the neck of the opposite side, produced a diminution of temperature in the limb carrying the pile. If, on the other hand, the limb carrying the pile were pinched, no matter where, below it, at the fingers, hand and thumb, or above it, at the forearm, arm or shoulder, the temperature of the limb became elevated. The same results were obtained in the lower limbs. They also found that pinching the lower limb, for instance, while the pile was upon the upper limb of the opposite side, produced a diminution of temperature in the limb carrying the pile; while, on the other hand, pinching the skin of the lower limb of the same side as the forearm carrying the pile, produced an elevation of temperature in that forearm. This elevation and depression of temperature was very little, not more than one-hundredth of a degree centigrade, the diminution being in general greater than the increase. The difference would have been greater had the temperature of the room in which they experimented been less elevated (19° to 21° Cent.) The maximum depression or elevation took place at the end of a minute and a half. The deviation of the flame indicating a change of temperature commenced almost immediately after the pinches. The stronger and more numerous the pinches the more marked the changes of temperature. Repetition of the experiments on the same person rendered the results, after a while, less and less pronounced. The elevation of temperature is ascribed to increase of blood in the part, the depression to a diminution; and the phenomena of change of temperature are attributed to the effects of vascular contraction or dilation, taking place by reflex action.—*Medical Press and Circular.*

QUARTERLY RECORD OF OBSTETRICAL SCIENCE.

COLLATED BY JOSEPH HOLT, M. D.

Some cases of Ulceration of the Os Uteri treated by the application of Carbolic Acid: Under the care of Dr. ROE, Coombe Lying-in Hospital, Dublin.

DR. ROE has been for some time in the habit of using carbolic acid as a local application in cases of ulceration of the os and cervix uteri, and has found it to yield results superior to another topical treatment which he has tried. He has used it — cases where the whole round of other applications has been unsuccessful, and always with the most happy results. He agrees with Dr. Roberts, of Manchester, who last year drew the attention of the profession to the subject, in considering it a caustic, which, as regards its severity, may take intermediate rank between the nitrate of silver and strong nitric acid, besides acting

as a disinfectant, a matter of no small importance in these cases. Dr. Roe does not use it in as strong a form as Dr. Roberts, and does not consider the strong acid necessary in very superficial ulcerations. A mixture of one part of the strong acid with two of olive oil seems to answer all ordinary purposes; but in cases of very deep ulceration the use of the strong acid may be called for. In such cases Dr. Roberts desires the acid to be liquified by the addition of a very small quantity of water. This has not been found to answer the purpose in the Coombe Hospital, but it has been there discovered by Mr. Weir, that the addition of a few grains of camphor will dissolve the acid, and will, moreover, prevent it again becoming solidified, even at a freezing temperature.

The application of the carbolic oil to the os uteri is best effected by soaking a little cotton wool in the liquid, securing it by a string, and introducing it through a speculum, the string being left depending out of the vagina, and the patient being directed to pull it away on the second day. This procedure is repeated in ordinary cases about twice every week. If it be desired to apply the acid to the cervical canal, it may readily be done, by passing into it a gum elastic catheter smeared with the carbolic oil.—*Medical Press and Circular.*

Lactation by a Woman Sixty Years Old.

DR. WM. A. GILLESPIE, of Virginia, records in the *Boston Medical and Surgical Journal*, the case of a widow lady, aged about sixty, whose daughter having died, leaving a child two months old, took the child and tried to raise it by feeding. The child's bowels became deranged, and being unable to procure a nurse, and her breasts being large and full, he advised her to apply the child, in hopes milk would come. She followed his advice perseveringly, and to her astonishment, a plentiful secretion of milk was the result, with which she nourished the child, which afterward became strong and healthy.—*Canada Medical Journal.*

Vaginal Cesarean Section.

DR. HENRY RISTINE, of Iowa, reports in the *New York Medical Record*, a case in which the head was pressed downward in labor so as to be covered by the vaginal wall. After waiting till there was no prospect of delivery without surgical interference, he made an opening in the vagina, through which he introduced his hand, and by turning delivered a child weighing eight pounds. A tent was placed in the fissure to prevent adhesion, and the woman made a good recovery.—*Pacific Medical and Surgical Journal.*

Ointment for sore Nipples.

IN the January number of Bouchard's *Répertoire de Pharmacie* we find the following formula for an external application for sore nipples, of which he says: "Three or four applications a day of the pomade, which is perfectly harmless to the sucking infant, is sufficient for a cure." The formula is as follows: R. Ol. theobromæ, 10 gmme; ol. amydg. dulce, 2 gmme; ext. krameriæ, 1 gmme. M. Ft. ung.—*Medical Archives.*

Cause of Doubtful Diagnosis of Presentation in Cases of Labor.

By Dr. GOODELL, Philadelphia College of Physicians.

THE child was a male, the mother a healthy primipara, and the labor normal; position L. O. A. At an early stage of the labor liq. amnii dribbled away, but so green in color as to lead to the suspicion of a breech presentation. After birth, this green fluid was found to proceed from the child's mouth, whence it continued to ooze in varying quantities for five days. Taking hardly any nourishment, the child lingered for three weeks in a state of rigid opisthotonus, and died a loathsome mass of ulcers. Dr. Goodell further stated that he had met with a similar green discharge in a case of face presentation, which obscured the diagnosis very much in the earlier stages of labor. The head was delivered by the vectis, but the abdomen was so distended by an hypertrophied liver that much difficulty was experienced in bringing down the arms and delivering the body. The child was a large well nourished male, but died thirty hours after birth. The green fluid constantly oozing out in large quantities from the mouth. In both there was this peculiarity, that this fluid was neither coughed up nor vomited up, but steadily oozed out of the mouth. In neither case was an autopsy made.—*American Journal of Medical Sciences.*

Extraordinary Birth.

THE account of a very extraordinary case comes to us by way of Dantzig, near to which, close by a town called Dirschau, a young woman has given birth to a foetus containing another and smaller one on its back. Here is the report of the medical man who examined the child. Dr. Preuss, Medical Officer of Health for Dirschau, writes thus:—"I was summoned on February 1st to Schliewen, to give my opinion on the child of a young woman, the wife of a shepherd, who had been delivered by the aid of a midwife on the previous day. The child was a very strong and healthy female infant, from the lower part of whose sacrum sprang a tumor the size of two fists. One could notice in this well-marked and powerful movements and in its interior I felt the parts of a foetus of the size ordinarily seen at five months. It was evidently

a double birth of a very rare, but not a new kind. Rokitansky says of it, in the first volume of his "Pathological Anatomy,"—“‘Double birth by implantation—1. Cryptodidymus (Gult), the so-called *fœtus in fœtu*, where a large and perfect *fœtus* bears in some spot under the skin, or in a cavity of the body, a second smaller and imperfect *fœtus*.’ To this class the foregoing case evidently belongs. They are allied to the following varieties:—‘2. Omphalocranodidymus, where the navel-string of one *fœtus* springs from the skull of another. 3. Epignathus, where an imperfect *fœtus* springs, with its blood-vessels, from the roof of the mouth of another fully developed.’” Such imperfect beings generally speedily perish, but in this instance such is not the case, for on March 4th Dr. Preuss reports both alive and well, the tumor being larger and its movements more active than when first seen. It has been suggested that the tumor is produced by spina bifida containing a cystic sarcoma, but the movements cannot then be accounted for. Meanwhile, two months after the birth, everything seemed going on well, and the child has been taken to Berlin for inspection by the medical authorities.—*Medical Times and Gazette.*

Case of Enormous Hypertrophy of the Neck of the Uterus during Labor, with adherent Placenta. By CLEMENT GODSON, L. M., Resident Accoucher, St. Bartholomew's Hospital.

ON March 3d, 1869, at 11 o'clock P. M., I was sent for by a pupil in attendance to see Mrs. C., aged 22, who had been in labor about three hours. This was her second confinement. I found her exhausted. Protruding from her vagina was a soft tumor about an inch and a half in length, which was apparently connected to the anterior lip of the cervix; the whole about three inches and a half long, and of the shape of a pear. The os uteri was fully dilated, and the head of the child was in the cavity of the pelvis. The pains were slight. I ruptured the membranes and applied the forceps, and extracted a large male child alive. In about twenty minutes, upon attempting to remove the placenta, copious hemorrhage ensued, and I found a considerable portion of the placenta firmly adherent. This I quickly removed; but the hemorrhage continued profusely, so much so as to occasion alarming prostration. Efficient contraction of the uterus was secured by well-maintained pressure, which was materially aided by the injection of very cold water. The general powers of the patient were supported by brandy and milk. For many hours so great was her prostration, that her life was in serious jeopardy. She ultimately fell into a profound sleep. Awaking somewhat prostrate, she was freely supplied with essence of beef and other nourishment. The following day she had considerably rallied, but still continues in a very enfeebled state of health, owing to incipient phthisis, to which there is a strong hereditary tendency.

The enlargement of the neck of the uterus, which had become so considerable as to become a formidable obstruction to the passage of the child, underwent a remarkable diminution within three days, and had almost subsided at the end of a week. It is worthy of remark that this extraordinary enlargement was only noticed by the patient three days previous to the accession of labor.—*Medical Times and Gazette.*

Eclampsia Puerperarum : By E. W. SELL, M. D., of New York.

AFTER carefully reading the letter of Dr. Vance, of Oneida, Illinois, (published in the Reporter, of February 13th, 1869,) on eclampsia puerperarum, I cannot refrain from presenting my views on the same subject. We fully agree with what the Doctor says in regard to putting the profession at large on their guard against tampering with human life, and with what he says about the value of human lives—about our feeling, and knowing that we are justified only in striving (not neglecting) to save lives that are precious indeed. But whilst we agree with him in this, we must beg leave to dissent from the conclusions which he draws from the two cases which he reports, namely, that the first patient died for the want of, and the second recovered “consequent upon rational treatment,” meaning a full and efficient depletion “with a broad-shouldered lancet.” Such reasoning sounds to me like *post hoc, propter hoc.* But one word in reference to the Doctor’s “idea, that, in all cases requiring it, phlebotomy should be practised, whether in puerperal convulsions, apoplexy, or pneumonitis.” At first sight, the Doctor’s guarded language, “all cases requiring it,” seems right enough; but every one who has carefully read it, knows what the Doctor would do and recommend in these cases; namely, resort to a “broad-shoulder lancet” in almost every one of them. Now it is a well-established clinical fact, that the puerperal woman generally loses a sufficient quantity of blood without artificial means, fully granting the well known fact, that nature provides her with a surplus quantity.

In apoplexy, the only time blood-letting would be rational as well as beneficial, is before the attack occurs. That is to say, practice phlebotomy as a prophylaxis, on those naturally predisposed to apoplexy, or else obtain a divine intimation that an attack is imminent, when bleeding freely would be the most efficient means of diverting it. So in pneumonitis, bleeding at the very onset of the disease accords with both sense and science, as also with the pathology of the disease. But will the doctor tell us how many cases come under our treatment early enough to warrant blood-letting?

Allow me, dear Editor, sufficient space in your very valuable journal, to state briefly a few facts in a case which terminated with the most happy results, “consequent,” as I believe, “upon rational,” and I may say, very scientific treatment.

On August 15th, 1868, an old practitioner of this city introduced me to a young woman, not yet seventeen years old, who expected to be confined in about three weeks. Before we saw the lady, the Doctor told me that he expected trouble in the case, and wished me to take charge of it. I found the woman larger over her abdomen than I had ever seen a pregnant woman before, with well marked ascites and considerable anasarca. To my surprise I was called to this woman early next morning. I found her in labor; the waters had broken and labor pains were regular and sharp; progress about as is usual in a primipara, until the head of the child was pressing hard upon the perineum, when suddenly all labor pains ceased and a severe convulsion set in, followed by others in close proximity, until I delivered her at about one P. M., of two male children, per forceps. Both children were asphyxiated, but they were both restored, though the second not without difficulty. Another convulsion occurred soon after delivery, but chloroform administered in teaspoonful doses inwardly as well as by inhalation, cut this one very short. Whenever symptoms of convulsions appeared, the same remedy invariably succeeded to prevent their occurrence. Leaving the patient at midnight, I found next morning that she had had six convulsions during the night, and during my absence in the middle of the day, three more, the last one lasting three-quarters of an hour. I then determined that the patient should be saved, if possible. I nursed her the entire night following without any help, and spent the greatest part of the succeeding two days and nights with her; and as a reward, had the great pleasure and satisfaction, not only to see her rally from a three days unconscious condition, but actually coming down three flights of stairs to the dinner table, as early as the tenth day. Four doctors, two of large experience, who saw the case, said that they had never seen its parallel. One of these who was present and assisted when I delivered the woman, one day said to me, "doctor, you can count that forceps case under convulsions as one of your cures, for it was not a recovery."

Now briefly for the treatment of this interesting case. First of all, three drops of ol. tiglia were administered in divided doses, to empty the bowels quickly and freely; and to allay the tenesmus, so as to afford rest and sleep; sol. magendi was occasionally given, but principally codeia, which we prefer to morphia because it does not produce similar head symptoms, nor has the same constipating effects as the former. Whilst the morphia would allay the pains of the back and extremities, the codeia would exert its influence over those having their origin in the great sympathetic nerve. To control febrile movement, we administered quinæ dragées à gr. ij., commencing with four, then giving three, two and one at a dose every six hours. Thus a countless pulse came down to 180, 150, 120, 90, very rapidly, and at the end of three days 80 was attained. Alimentation consisted in milk, tea, and beef-tea from the very outset. To overcome a

fearful tympanitis very readily, five drops of turpentine were occasionally given. To build up the appetite and strength, we gave our favorite triplex tonic—the phosphate of iron, quinia and strychnia, which is the *ne plus ultra* for the puerperal woman.

Whether this is the more rational and scientific treatment, or the practice of phebotomy, is a question whose solution I leave to our readers.—*Medical and Surgical Reporter.*

Diagnosis of Partial Rupture of the Uterus.

DR. HECKER remarks that the partial rupture of the substance of the womb without implicating the peritoneal coat is an accident scarcely less serious than when the rupture is complete, but unattended by the alarming symptoms which mark the occurrence of the latter. In general an unexpected fall in the size, with increase in frequency of the pulse, is perhaps the most decisive indication of the occurrence of partial rupture of the uterine walls. Among the local symptoms Dr. Hecker enumerates one nevertheless as of a very negative character, the sudden occurrence of a haematocele situated between the walls of the uterus and peritoneum. Dr. II. met with this in two cases. In the first the partial rupture was caused by the presence of a hydrocephalic fetus; in the second it was the result of medullary carcinoma of the posterior lip of the os uteri. In both cases during labor, the upper wall of the vagina was found to be pressed downwards by a soft elastic tumor. In the first of these cases no examination of the body after death was permitted; but in the second the swelling in the vagina was found to result from an effusion of blood beneath the peritoneum.—*Centralblatt f. d. Medicinisch Wissenschaften.*—*Medical Press and Circular.*

Notes of a case of Separation of the Uterus from the Body by Laceration during Labor. By THOMAS PAGET, F. R. C. S., and EDWARD R. C. DENTON, M. R. C. S., Leicester.

THE distressing imputations which Mr. Popplewell has recently incurred by attendance upon a case of entire separation of the uterus from its vaginal attachments, prompts us to offer the following report of a similar sad occurrence which has come under our own notice. The more frequent such records become, the less liable will our professional brethren be to suffer from misconstruction on the part of the ignorant.

February 11th, 1869. S. F., aged 24, the mother of two children, was confined of her third full-grown child this morning early. The labor was described by the midwife and others present as not unusually severe, and it was over in three hours. The

placenta was removed with but little traction twenty minutes after the birth. To this, however, on examination, a large fibrous mass was found to be attached, and closer investigation showed this mass comprised the whole uterus, Fallopian tubes and ovaries; with, of course, their usual peritoneal covering. The vaginal membrane hung loose and was jagged by laceration. Surgical aid was sought; but the poor woman collapsed and died in full retention of her senses about three quarters of an hour after delivery, and before Mr. Denton's assistant could arrive. The quantity of blood lost does not appear to have been large or above the average of labor.

Post mortem section showed the pelvis occupied by coagula; and the hand passed from the abdomen to the os externum, through which the fingers readily made their way out.

If it appear at first as probable that in these cases the dreadful result has for its cause an undue force used by the obstetrician, let us take a view of the uterus at the point of mature gravidity, floating in the abdomen, moored, so to speak, to the pelvis only by the round ligaments and the unsubstantial vagina. Then let us see it in labor as the power for forcing the foetus through the pelvis, the only power, indeed, except the abdominal muscles, attenuated as they are at the full period. Whether their aid be much or little, or whatever may be the force felt for the uterus to exert, its capability and habit of violent effort is great, and may be estimated by the pinching and extrusion of the hand of the operator in cases of turning and hour-glass contraction, and cannot be lightly considered by those who have had their hand paralysed for the time by it.

For the exertion of the detrusive power of the uterus, there is no *point d'appui*, no purchase, except the forenamed slender moorings—the round ligaments and sheet-like attachments of the vagina. Who shall wonder that they occasionally give away? Nor, looking further at the mechanism of parturition, and the opportunities of doing mischief open to the practitioner, do we find more than the bare possibility of this damage arising from such a source. It is certain that no force can be applied to lacerate the uterus from its pelvic attachments until it is inverted and wholly outside the vulva; and surely not the most wretched meddler would be so mindless as to continue traction beyond this point—to remove a placenta when twice its substance was already in hand. The uterus, too, after dilaceration, would remain inverted, which condition has never yet been named in connection with the accident, and certainly did not obtain in the present case. If any one, then, be ready to believe that in turning or hour-glass contraction of uterus sufficient force can be used by the operator simultaneously with the paralysing contraction of the womb itself to tear away the womb itself, we cannot think that he has ever had his hand cramped into a powerless state as above.

It may be mentioned that the verdict at the inquest expressed that there was not sufficient cause to show that undue force had

been exerted by the midwife, who had previously attended more than 500 labors.—*British Medical Journal.*

Report of a Case of Rigid Os Uteri.—Incision: Under the care of THOS. HENRY SANDFORD, A. B., M. D., M Ch., Ex. Schol., etc.

MRS. A., aged thirty-one, suffered, since the birth of her second child about six years ago, from prolapsus uteri. When I first examined her in February last, the uterus was completely down, and quite hard and dry. Having replaced it, I ordered a pessary to be worn during the day, also a mixture containing ferri and quiniæ citras, and tinct. columbae to be taken. Shortly after this she became pregnant, her youngest child being then five years old. On Saturday, December 19, labor commenced. Upon examination the os could be detected, completely closed, very far back, and so high up as to be reached only with difficulty. The cervix was very thin and spread over the head, so that there was no difficulty in diagnosing the presentation to be in the third position. The pains continued fairly during the night, but on Sunday morning began to fail, and ceased entirely during the day. I therefore gave her a draught containing twenty drops of tinct. opii, which procured four or five hours sleep. On awaking the pains returned, and continued moderately during the night.

Upon examination on Monday morning the os was found to be dilated so as barely to admit the finger, and felt exactly like an india-rubber ring. There was no "bag of the waters," and the lower segment of the uterus was extremely thin and tightly embraced the head. Labor continued during the day, and the usual remedies recommended by Dr. Churchill for rigid os were tried without the slightest success. It was now evident that the labor had virtually assumed the second stage; the pains began to decline, and on Tuesday the symptoms of powerless labor were rapidly setting in. I therefore came to the conclusion that there was nothing for it but incision of the os. Accordingly, I sent for my friend, Dr. Tuckey, Medical Officer of Bantry district, who, upon a careful examination of the case, agreed in my opinion. We therefore set about incising the os, which was a task not so easily performed as would appear at first. The presentation being in the third position, the forehead rested against the pubis, and from the labor having for some time been virtually in the second stage, the head pushing against the lower segment of the uterus, distended the anterior portion of the latter more than the posterior. The consequence was that the long axis of the uterus being moved from its normal position carried the unyielding os upwards and backwards almost to the promontory of the sacrum. The anterior and posterior lips having been cut, the forceps was with some difficulty got in, and the patient delivered of a full grown female child, which was born apparently dead, but on the application of the usual means quickly recovered.

Both mother and child are now doing well, the latter having got on without a single bad symptom.

The cause of the rigidity in this case would seem to be an altered state of the uterus in consequence of being protruded (during the day) for more than five years. When first I saw it, it was covered with what resembled hardened cuticle. There was also a small ulcer about the size of a pin's head at the edge of the os.

The total absence of liquor amnii may also have had its share in preventing dilatation.—*Medical Press and Circular.*

Carbolic Acid in the Sickness of Pregnancy. By EDWARD GARRAWAY, Esq., Faversham, Kent.

ALLOW me to add my mite of testimony to the report in the British Medical Journal of February 13th.

Carbolic acid is the only remedy which I have ever found of any avail in pregnant sickness, and of its efficacy here I entertain no doubt whatever. Patients who have had it in one pregnancy, invariably ask for "that tar medicine" in the next. In other forms of sympathetic vomiting, it has proved no less valuable. I quote the two most noteworthy cases I have met with, premising that I am not given to exaggerate.

Miss —, aged 19, a highly hysterical girl, the subject of pelvic abscess, had vomited every meal immediately after swallowing it for three years. Physic and physicians, of course, had been exhausted upon her. I gave a drop of carbolic acid three times a day. She retained this from the first. After ten doses had been taken—i. e., on the fourth day—a meal was kept down; and from this day she retained alternate meals. In a fortnight, two meals out of three stayed; but the unwonted presence of so much food in the stomach, occasioned such distress, that I was induced to partially withdraw the remedy, and allow two out of four meals to be rejected. The carbolic acid, however, was gradually persevered with; and, in the course of a year, the stomach was able to bear and retain four meals a day.

Mrs. —, at the eighth month of gestation, engaged me, and complained that she had been sick throughout her pregnancy. I declined prescribing assuring her that the vomiting would cease immediately after delivery. However, it persisted as before; and she then informed me that for nine years she had never passed a day without vomiting, sometimes several times a day. This condition resulted from an attack of fever. I waited a fortnight after her accouchement, and then put her upon carbolic acid. She never once vomited again. The remedy was continued a fortnight, then gradually withdrawn.

I give drop-doses of the crystal, liquified by heat, and diffused in half an ounce of thin mucilage, three times a day.—*British Medical Journal.*

QUARTERLY RECORD OF SURGERY.

COLLATED BY SAM'L LOGAN M. D., PROF. OF SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Surgical Treatment of Cleft of the Hard Palate, with an Illustrative Case. Read at a meeting of the New York Medical Journal Association, February 10, 1869; By WM. R. WHITEHEAD, M. D., New York. (Condensed.)

GENTLEMEN.—I ask your indulgent attention to what I have to say about a German operation, and I believe I am the first who has endeavored to introduce it in this country. Many of you, I have no doubt, are familiar with Pollock's successful cases of cleft of the hard palate, and possibly some of you are acquainted with the attempts of Baizeau at restoration of acquired defects of the palatine vault. I shall not detain you with a consideration of the old modes of operating for cleft of the hard palate. It affords me pleasure, however to remind you that to our honored and lamented countryman, J. Mason Warren, whose signal services in American surgery are respected at home, and widely esteemed abroad, is due one of the most remarkable and singularly successful efforts at closure of an extensive cleft of the hard palate. The direction and extent of the incisions in this case, as subsequently were those used by Pollock, resembled very much those adopted in the German method. But what particularly distinguishes this method is the inclusion of the periosteum within the flaps, with a view to the reproduction of bone. As you are well aware, the subject of the reproduction of bone from the periosteum has been well studied practically in our own city. The comparatively recent publication of the extensive works of Ollier and Sédillot has added fresh and much increased interest to this suggestive subject. The experiments of Flourens on the periosteum of animals were not lost to science, and some desirable applications to surgery have attested the value of those experiments. Never are we more forcibly reminded of the fortuitous distribution of isolated scientific facts, which often seem of no use until beautifully developed by some fertile intellect. To Langenbeck we are indebted for an eminently useful application of the principles which Flourens had enunciated; to this Prussian surgeon is due a very successful operation which, while it includes the periosteum in the flaps, with a view to the ultimate reproduction of bone to close the fissured vault, preserves the nutrient vessels uninjured, and thus contributes to success, by the avoidance of gangrene and sloughing of the flaps. * * * * *

* * * * * I propose this evening to give you only a general description of this new method of operating for cleft of the hard palate, and for more ample details I beg to refer you to an extended paper by me on this subject, in the October number

of the American Journal for 1868. I shall not presume to repeat here verbatim that which is quite accessible to all of you who may desire to consult this article at your convenience; but I shall request permission to refer, if necessary, to the woodcuts contained in it. I think that there can be fairly claimed for this operation advantages which entitle it to a prominent place in the list of useful operations. While I am quite sensible to the objections, some of which may with reason be urged against it, yet the undeniable advantages in its favor may justly claim your attention. In giving a brief history of the case which I offer for your inspection this evening, I shall endeavor to embody in it the most important points necessary to a comprehension of this operation, designated by the somewhat dissonant term, muco-periosteal uranoplasty. But previously I request your attention to the peculiar distribution of the arteries which supply the roof of the mouth. The descending or superior palatine artery, as you know, before emerging from the palatine canal, gives off a few small branches, which pass down the small accessory palatine canals, and are distributed to the muscles of the soft palate and mucous membrane. The superior palatine, in its horizontal portion, runs along in a groove at the junction of the horizontal plates of the maxilla and palate bones with the alveolar process (see Fig. 1).

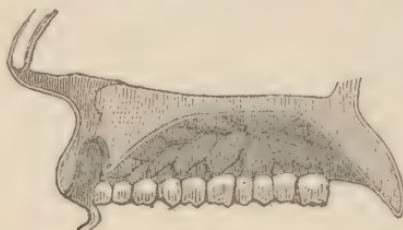
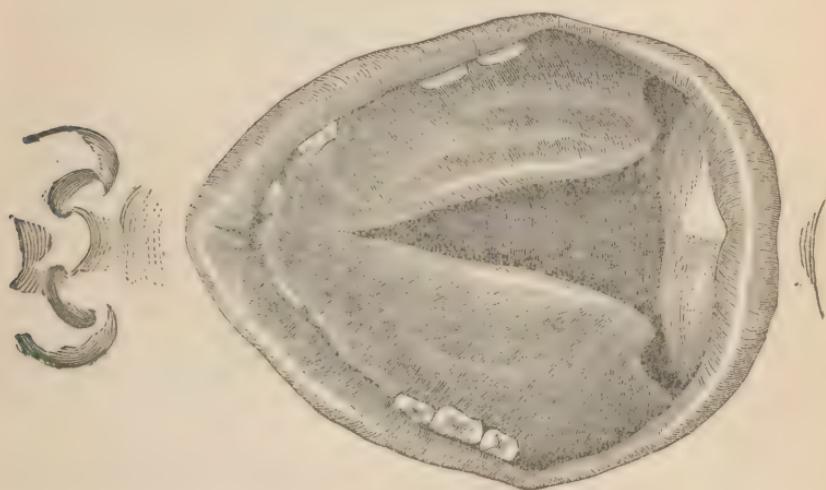


Fig. 1.

Anteriorly this artery passes through the anterior palatine canal upward to anastomose with the one on the opposite side and the artery of the septum nasi. The horizontal portion of the superior palatine is of considerable size, and is included in the periosteal flaps when they are detached from the bone. But these flaps remain adherent at their three nutrient points which correspond to the orifices of the spheno-palatine canals and the anterior palatine canal. The superior palatine is of considerable size, and if cut may occasion troublesome haemorrhage. But this accident can be readily avoided by carefully detaching the periosteum with a blunt periosteal elevator. There is a little branch of the ascending palatine which, after passing between the tendons of the levator and tensor-palati muscles, is in relation with the inner border and posterior surface of the tensor-palati muscle, and the knife, in dividing this muscle during the operation to relax the velum palati, cuts this little branch, and nearly always causes some bleeding, but which, however, can be conveniently checked with ice-water spray thrown on the part. * * * * *

CASE.—Maria D., aged seven, had a complete cleft of both the hard and soft palate. The cleft originally extended through the alveolar process in front, and was complicated with hare-lip, which last had been operated upon before I saw her, leaving an ugly-looking notch, which, however, can be readily closed. The cleft was five-eighths of an inch posteriorly, and gradually diminished toward the front at the alveolar process (see plate before operation.) * * * * *



Before Operation.

On the 16th of last December I closed the whole of the cleft by suture, most efficiently assisted by Drs. Louis Elsberg, F. A. Burrall, Octavius White, and Dr. Robert Newman. This last gentleman kindly administered ether. The operation was long and tedious and required considerable patience.



Fig. 2.

This stout wire gag (see Fig. 2), which I hold in my hand, was used to keep the mouth open during the operation. I think that this instrument is very well suited to many operations on the mouth, and has been much improved by the addition of a tongue-depressor. The patient was placed on a sofa opposite a window, but the light was so dim that afterward artificial illumination was used.

After the administration of ether, the palato pharyngeus, palato-glossus, and levator-palati muscles were severed, and the operation continued; but not until after the loss of considerable time from vomiting by the patient. There was also some delay occasioned in arresting the bleeding, and in washing out the throat with a spray apparatus.

The point of a sharp knife, curved on its surface (see Fig. 3),

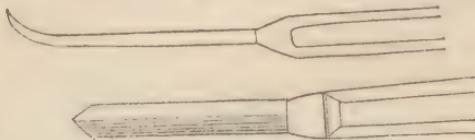


Fig. 3.

was passed around and behind the hamular process, and over the lower part of the internal pterygoid plate, so as to cut loose the mucous membrane which confined each lateral half of the velum to this part.

If there had been a very perceptible ledge of bone, formed by the horizontal process of the palate bone, it would have been necessary, as Langenbeck recommends, to detach the mucous membrane from the posterior border of this vestige of the palate-bone; and this is a very important precaution, as otherwise the flaps will not fall together as they should after other stages of the operation are completed. This was the most difficult and tedious part of the operation, and is generally so considered. An incision was next made along the edges of the cleft. It is proper here to remark that, if there be a ledge of bone, this incision should run along its edge, being careful in every case, to keep at least an eighth of an inch beyond the groove in which courses the superior palatine artery. This incision should be made to the bone, and run along on its surface.

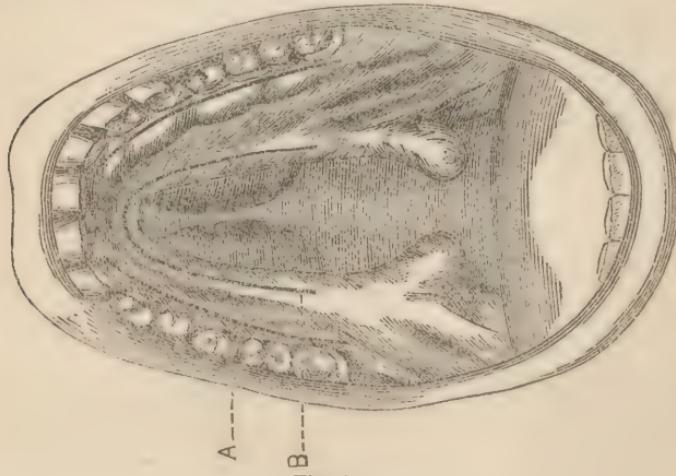


Fig. 4.

Other cuts were next made, one on each side, which extended from about the eye-teeth to slightly beyond the last molars, and along the border of the gum (see A and B, Fig. 4, copied from Langenbeck). These cuts were made through the periosteum and to the bone.

Such extensive cuts may not always be necessary, and *interrupted side cuts* have sometimes been preferred. For detaching the periosteum, I made use of an instrument like this (see Fig. 5)



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Fig. 5.

which Dr. Sayre facetiously calls his oyster-knife, and which he uses most advantageously in detaching the periosteum in operations on the hip-joint.

Gentlemen, this instrument is far superior for this purpose to any periosteal elevator that I have seen, and much more handily used than that of Langenbeck, which I here exhibit :

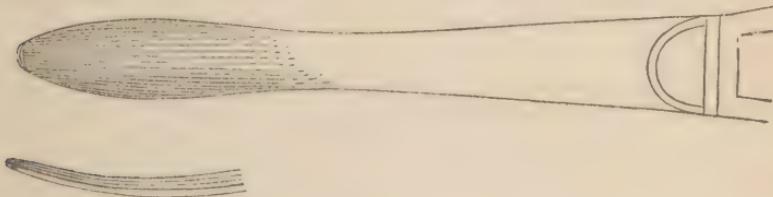


Fig. 6.

In detaching the periosteum, the nutrient parts of the flaps to which I have alluded, were carefully respected ; and, after this stage of the operation was completed, the flaps almost met in the middle line. The paring of the edges was next done, and the passage of the sutures, seven or eight in number, was readily accomplished by means of this suture needle—

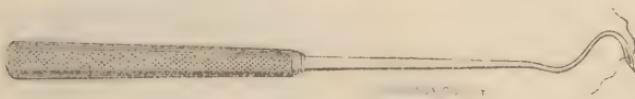


Fig. 7.

which I claim to be better than that used by Langenbeck or others in this operation. A silver-wire canulated needle was essayed in this case for making one suture, as on a previous occasion ; but I prefer the needle which I have shown you, as being more simple.

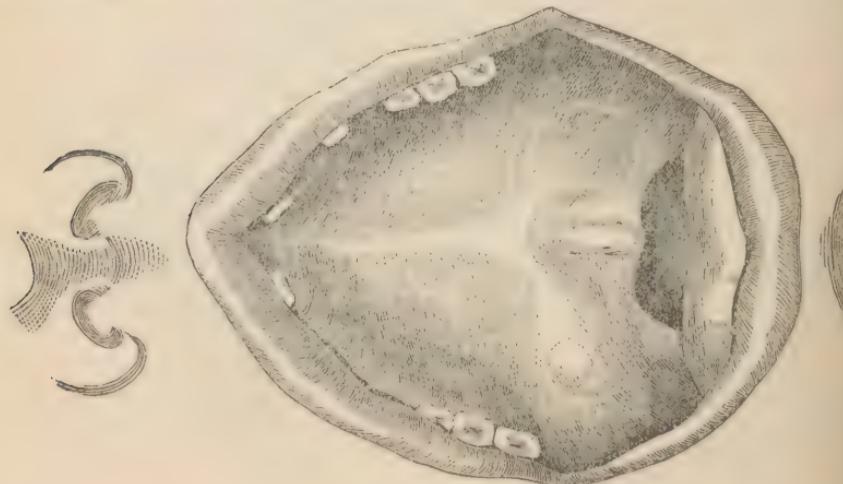
Some of the wires were twisted, and some of them were tied, as Sims's instrument, which I had made use of for adjusting the wires, had become misplaced, and could not be found until after the operation.

Bits of cotton were stuffed in the side cuts, to keep them from healing too soon, and, also, by the pressure which they exerted on the sides of the flaps, to extend the line of union.

The haemorrhage was quite abundant for a few minutes, but was readily controlled by means of ice-water spray. This bleeding came from the little branch of the ascending palatine artery, when I divided the levator-palati muscle. The bleeding which occurred in detaching the periosteum was very inconsiderable, as this membrane was torn off with the blunt edge of an elevator. In this respect the detaching of the periosteum in this manner guards against the haemorrhage which was formerly the accompaniment of *mucous* uranoplasty. On one occasion, my first uranoplastic operation, I cut the superior palatine artery, but controlled the haemorrhage, without much trouble, by compression and the use of styptics.

Langenbeck states that, "in fourteen cases in which mucous uranoplasty was done, there were six cases of dangerous secondary haemorrhage; whereas, in twenty-five cases in which the periosteum was detached, there was no after-bleeding."

The patient was put to bed, and some strong beef-tea and other liquid food, as milk, ordered, as her only nourishment for ten days. There was no sloughing or profuse suppuration following this operation. Spray containing carbolic acid was thrown twice a day into the side-cuts, into the throat, and through each nostril into the nose; great care was taken not to project the spray on the line of union. The cotton plugs were removed several times, and fresh ones saturated with glycerine put in their places. In the left side-cut some of the cotton remained much longer than I intended, and was not discovered until all the sutures were removed. Most of the sutures were taken out about the fourteenth day, and the last ones remained until the 18th. The union was found complete all the way through (see Fig. after operation);



AFTER OPERATION.

and the parts at present feel as if solid bone will ultimately be formed. This point, however, I prefer to test a little later with a needle.

For making the side-cuts I used a knife like this :



Fig. 10.

and for dividing the pillars of the fauces a sickle-shaped knife like this :

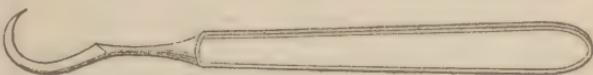


Fig. 11.

* * * * * —*New York Medical Journal.*

Syphilitic Affections of the Throat. Read before the Medical Society of London.

A GOOD practical paper "On the Syphilitic Affections of the Throat," using that term in a wide sense, was read by Dr. Morell Mackenzie on Monday evening. The author, in fact, broke a great deal of new ground in the account he gave of his laryngoscopic explorations. The venereal affections of the trachea and larynx had, up to the introduction of the laryngoscope, been examined post-mortem; but during life they had been clinically unobserved, though not uncared for. The laryngoscope, of course, now places the practitioner at an immense advantage, in that it enables him not only to examine and to watch, but also to have the freest access to the diseased surfaces that were formerly out of his reach, and to apply remedies thereto which check the progress, and remove the effects of disease, be they slight or serious. The advantage of laryngoscopy was well exemplified from an examination of a series of highly finished drawings and morbid specimens handed round the room for the Fellows' inspection. Dr. Mackenzie described in detail the various kinds of secondary and tertiary diseases seen in the larynx and pharynx. He stated that the erythematous forms of inflammation often underwent spontaneous cure. Deep ulceration in the larynx he had found to be rare; and patients in whom such did occur were often tuberculous. Mucous tubercles in the larynx were not frequent, and not recurrent; in the pharynx they were more prone to undergo ulceration. The author pronounced himself, in regard to secondary syphilitic affections of the throat, a "non-mercurialist," trusting, as he did, to inhalations of creosote, to lotions of perchloride of iron, and the application of tincture of iodine especially. Syphilitic nodules were often found in the larynx,

and bore some resemblance to phthisical disease; but in the latter case deposits had a greater tendency to soften and to ulcerate, and there was more discharge. Gummy tumors of the parts about the throat, were particularly mentioned as preceding deep and extensive ulceration, erosion of the cartilages, and secondary œdema. In this and other forms of tertiary disease, Dr. Mackenzie gives largish doses of iodide of potassium only. Paralysis of the muscles about the larynx, deformity from cicatrization, myolitis, neuritis, and also gummy tumors at the base of the tongue, were noticed in detail, and a case of primary perichondritis was related. Difficulties of diagnosis arise when the seat of disease is in the larynx. Here syphilis, phthisis, and cancer might be confounded. In syphilis, ulceration is extensive perhaps, but there is not much thickening, and the epiglottis is the chief seat of disease. In laryngeal phthisis there is uniform thickening always preceding ulceration, and the cartilages of Wiisberg and Santorini are primarily affected. In cancer there is great irregularity, with much deposit, and the relative position of the parts is altered. The disease attacks the neighborhood of the arytenoid cartilages, and the posterior wall of the larynx is affected. The general symptoms in each case, the temperature, the state of the lungs the cachexia, and various co-existences, aid, of course, materially in diagnosis. It should be noticed, perhaps, in addition, that Dr. Mackenzie gives the iodide of potassium with large quantities of water, and continues it for some time after the healing of the ulcers. He cleans the latter very thoroughly before using his caustic or astringent remedies.

Mr. H. Lee, Mr. de Méric, Dr. Tilbury Fox, and others, took part in the discussion, which was complimentary to the author of the paper, though the three speakers named differed from him specially in regard to the use of mercury in secondary syphilitic affections.—*Lancet*.

A New Method of Amputation.

DR. GEORGE BUCHANAN, surgeon to the Glasgow Royal Infirmary, publishes the following in the *Lancet* :—

In cases of injury or disease demanding amputation in the lower part of the thigh, the operation known as "Carden's" is generally admitted to give the best results, both as regards safety and the shape of the stump. My own experience, especially during the past two years, in which I have operated many times, is decidedly in favor of that method when practicable. But I desire to call attention to a method of dividing the bone in patients under puberty, which I have practised most successfully in two cases, and which I intend to adopt in all similar cases.

CASE 1.—A boy, aged ten, had his leg crushed by machinery close up to the knee. I performed amputation by a long anterior

flap. After I had cut through the soft parts, I drew the knife round the condyles to divide the periosteum, where I meant to apply the saw, when I found that it passed into the soft cartilage separating the inferior epiphysis from the shaft of the femur. I had laid aside the knife, and by using gentle force easily broke off the epiphysis, leaving the shaft with a rounded end, in which neither cancelli nor medullary cavity were exposed. The wound healed with great rapidity, and it was the most perfect stump I ever saw.

Three advantages seem to me to attach to this plan, which is applicable to all cases of amputation of the thigh in patients under puberty.

1st. The shape of the end of the bone renders the stump exceedingly favorable for the adjustment of the artificial leg.

2d. The end of the bone, being rounded, nodular, and smooth, needs little, if any, alteration by reparative processes during the cure.

3d. The risk of purulent absorption and pyæmia, which always attends the exposure of the cavity of a bone, whether cancellated or medullary, is in this form of amputation absent, so far as the bone is concerned.

I therefore commend this operation to the attention of practical surgeons in operating on patients under puberty.—*Medical Record.*

Sutures in Scalp Wounds.

HORACE BASAN, resident surgeon to the St. Marylebone Dispensary, says of sutures in scalp wounds:—After the consideration of the several hundred cases I have arrived at the following conclusions: 1st. That the employment of metallic sutures in scalp wounds is less liable to induce erysipelas and sloughing than strapping with adhesive plaster. 2d. That by their use we are enabled to bring and *preserve* the edges of the wound in most perfect apposition, dispensing with much of the heavy strapping and bandaging in common use. Lastly, That should an inflammatory blush appear at the edge of the wound, or much tension on the sutures ensue from suppuration or otherwise, their removal may be had recourse to forthwith.—*Lancet.*—*Medical Record.*

Catarrh of the Bladder.

THIS disagreeable chronic complaint is often very obstinate; it may therefore just be stated that M. Mallez has found the following solution injected *into the bladder* very efficacious: water, ten

ounces; tincture of iodide, forty-five drops; iodide of potassium, fifteen grains. When the pain is very annoying, add fifteen grains of extract of belladonna to the above. He has also employed carbolic acid, nitrate of silver, and hyposulphite of soda, with advantage.—*Medical Record.*

A Few Remarks on Tracheotomy; with Cases: By T. R. JESSOP,
F. R. C. S., Lecturer on Physiology at the Leeds School of
Medicine, Surgeon to the Leeds Public Dispensary, etc.

I have two suggestions to offer for the improvement of tracheotomy tubes as ordinarily constructed. A remark commonly made after performing the operation is, "How much deeper the trachea is than it seems to be!" We may go further with our reflections, and add, "How much deeper the trachea is in the living than in the dead!" In private practice, where the patient resides at a distance from the surgeon, it is no unusual circumstance to be told, on making the morning visit, that the patient, especially if it be a child, has died after a violent fit of coughing during the night. And if the throat be examined, it will not unfrequently be found that the tube has been forced out of the trachea, and is lying irregularly in the wound; that, in fact, the child has died suffocated, because the tube was only just long enough to reach the trachea, and has therefore become readily displaced during the act of coughing, or in swallowing. The ordinary tracheotomy tubes would seem to be made to correspond with the apparent, and not with the actual depth of the trachea—to reach the trachea of the dead and not of the living. Those I am in the habit of using are nearly half as long again as the ordinary tubes, and I find them very advantageous. I had them made after losing two children in the way I have described above.

My second suggestion—the principle of which is, I believe, recognized, but is not sufficiently appreciated by instrument makers,—is, that the two blades of the outer canula should be made so that they lie in *close apposition* at their distal extremities, and are separated only by the introduction between them of the inner canula.

By the adoption of this means the most difficult step in the operation of tracheotomy—viz., the introduction of the canula through the slit in the trachea will be much facilitated.—*Lancet.*

Lithotomy for Irritable Bladder.

A very interesting operation not frequently resorted to, though not altogether new, is that of lithotomy for irritable bladder, which Verneuil practised not long since. A man, aged forty,

frequently exposed to wet weather, began to complain of pain in the region of anus and neck of bladder about six months ago. The patient soon found himself obliged to urinate every two or three hours, causing great tenesmus and suffering. These spasms rapidly increased in violence and frequency, so that latterly he had to urinate every ten or fifteen minutes, although but a small quantity of a limpid fluid was voided. He entered the hospital about the middle of February last. In the meantime, every possible means to alleviate his sufferings had been tried. Baths, medicaments administered internally or by anus or injected into the bladder, were of no avail. The urine contained pus, albumen in small quantity, and of late a few drops of blood had been passed at the end of each micturition. The canal was perfectly free from any stricture; an ordinary-sized catheter could be easily introduced, and had been left in place for some length of time. There was no prostatic lesions; the kidneys were healthy; there was no foreign body in the bladder. The hypogastric and anal regions were tender upon pressure. Bromide of potassium, which had not been tried by the former medical attendant aggravated the symptoms. Opium, camphor, turpentine, colchicum, copaiva, quinine, aconite, mineral waters, etc., etc., had been tried, but gave no relief. Injections of seltzer water were not tolerated. Seeing the patient's health fast failing, Verneuil decided to incise the neck of the bladder, and accordingly operated on March 15, 1869. A median incision of about an inch and a half in length, is made, and by the double lithotome the prostatic gland is incised bilaterally. Scarcely a drop of blood was lost. A caoutchouc tube is placed in the wound. The remarkable part of the case is the complete cessation of the pains and the spasmotic contraction of the bladder. The patient, whom we saw this morning (twenty-eight days after the operation), has quite regained his strength, and does not suffer in the least, except from the inconvenience of the tube which is still left in place until the inflammatory action of the mucous membrane of the bladder may have ceased. The urine, although not yet quite normal, has much improved, and in all we may record the case as a perfect success. Certainly without this heroic treatment the patient would have succumbed to his horrible sufferings ere this.—*Paris Letter in Medical Times and Gazette.*

Breach of a Gun Impacted in the Forehead for Twelve Years; Removal; Recovery. Under the care of Mr. GEORGE LAWSON. Middlesex Hospital.

J. G., aged twenty-eight, was admitted into the Middlesex Hospital, under the care of Mr. Lawson, complaining of a very offensive discharge from the nostril. There was a deep scar just between the frontal sinuses, and the right side of the nose in the

upper part was rather swollen. There was fairly marked exophthalmos, the right eye being more prominent than the left; the conjunctivæ were somewhat injected. On examination by the nostrils it was found that a hard and movable body was lodged beneath the scar, and in the upper part of the nasal cavity. The patient stated that twelve years previously his gun burst while shooting wild fowl, and produced a severe wound between the eyes, and many smaller ones in his face. He did not become insensible, and was able, with assistance, to walk home. He was laid up for four months, during which time his eyes became inflamed, and the room was kept darkened for a month or six weeks. The eyesight on the right side became completely destroyed; he has, however, been since able to distinguish light. The left eye was also slightly affected at the same time, but it completely recovered. He was occasionally delirious. The wound of the forehead discharged profusely for about a year, when it healed up, to break out afresh again and again. He observed that, when the discharged appeared by the nostrils, the wound in the forehead closed. He was attended through his illness by several medical men, but they never found, nor did they appear to suspect, the presence of a foreign body. The patient remained pretty well up to about three years ago, when he began to suffer from severe neuralgia on the left side of the nose and adjoining cheek. After nine months' suffering it left, and at the same time he felt a loose body in the nostril. He continued in this state up to the date of admission.

Operation.—Mr. Lawson first endeavored to pull out the foreign body from the nose with a pair of strong forceps introduced through the nostril; but this he failed to do, as, although he could grasp it without any difficulty, yet it was too large to be drawn through the nostril. He therefore laid open the right cavity of the nares by an incision carried through the nostril along the fold which forms the line of demarcation between the cartilage of the nose and face. The piece of iron was then seized with the forceps, and, after considerable traction, removed; it weighed an ounce and a quarter, and was covered with a thin layer of rust. The wound was united with two fine sutures. The patient recovered without a bad symptom, and in a week left the hospital.—*British Medical Journal.*

Imperforate Vagina. King's College Hospital.

In a girl in whom the vagina appeared to be quite absent, Mr. Wood endeavored to find or construct one with the object of rendering her more "apt" for marriage, which she was bent upon undertaking. The existence of a uterus was doubtful, a small hard nodule being felt per anum, which may possibly be that organ. Into the urethra, the meatus of which was exceedingly large, a gum catheter was introduced, and then, the finger having been passed into the rectum, Mr. Wood cut down upon the

plane surface of skin, which seemed all that intervened, and this being divided, a finger was forced onwards through cellular tissue, and a not deep cul-de-sac formed, and into this a porcelain plug was tied. This case did not seem a particularly hopeful one for treatment, and it was only at the patient's urgent request that the attempt was made.—*Lancet*.

Carbolic Acid.

WE think it necessary to put our readers on their guard against an inadvertent use of carbolic acid. It seems to be forgotten sometimes that this substance exercises a powerfully destructive action upon animal tissue, and that it is, in fact, a very strong caustic when concentrated. There is no doubt that many serious accidents have recently occurred from surgeons not being aware of the properties of the remedy they use so freely. It must also be remembered that the direct application of carbolic acid, even in a diluted form, to a granulating surface, will often delay cicatrization, and tend to promote suppuration, whereas, if it is employed at a distance from the wound, it will tend to diminish the formation of pus. There is, moreover, a good deal of evidence to show that it tends to stimulate the circulation through the smaller vessels, and thus gives rise to haemorrhagic oozing from recently cut surfaces, preventing their primary adhesion. If, however, it be properly applied in a diluted form to the wound itself, and in some permanent and non volatile form to the external parts, it will be found to have a powerful influence in retarding and diminishing suppuration.—*Medical Times and Gazette*.

The Reputed Cure of Snake-Bite.

THE very gravest doubts have been thrown upon the asserted efficacy of the "ammonia" treatment of snake bite, by Dr. Fayerer, the Professor of Surgery in the Medical College of Bengal. This gentleman has recently injected into the veins of a dog bitten in the thigh by a fresh, full-grown, spectacled cobra, a solution of strong ammonia, as directed by Professor Halford; in 44 minutes and 15 seconds the dog died. Similar results were obtained with pigeons. Dr. Fayerer says that death is rather later than usual in those cases in which ammonia is given, perhaps; but the benefit of the drug is very small, though further experiments may show that, given in larger and freer doses, it may be of service. Dr. Fayerer has performed the exact experiment which we wished,—that is to say, he has applied the antidote to the case of the bite by a known and highly poisonous snake. There were doubts in Professor Halford's cases as to the exact degree of venomous power of the snakes which had bitten his patients. A fair bite from a fresh cobra is known to entail

certain death, and the possession of the power on the part of a remedy to prevent evil consequences is at once the best proof of its antidotal qualities. Dr. Fayrer has likewise experimented with the antidote in the possession of a servant of Colonel Showers, to which we recently referred, and finds that it is utterly useless.—*Lancet.*

QUARTERLY RECORD OF PRACTICE OF MEDICINE,

COLLATED BY S. M. BEMISS, M. D. PROFESSOR OF PRACTICE OF MEDICINE, ETC.
UNIVERSITY OF LOUISIANA.

How to prevent Typhoid Fever.

IN the British Medical Journal of March 27, Dr. Wm. Budd advocates the following means to prevent the spread of typhoid fever :

The means by which typhoid fever may be prevented from spreading are very simple, very sure, and their cost next to nothing. They are founded on the discovery that the poison by which this fever spreads is almost entirely contained in the discharges from the bowels. These discharges infect—1. The air of the sick room ; 2. The bed and body linen of the patient ; 3. The privy and the cesspool, or the drains proceeding from them. From the privy or drain, the poison often soaks into the well, and infects the drinking-water. This last when it happens, is of all forms of fever poisoning the most deadly. In these various ways, the infection proceeding from the bowel-discharges often spreads the fever far and wide. The one great thing to aim at, therefore, is to disinfect these discharges on their very escape from the body, and before they are carried from the sick room. This may be perfectly done by the use of disinfectants. One of the best is made of green copperas. This substance, which is used by all shoemakers, is very cheap, and may be had everywhere. A pound and a half of green copperas to a gallon of water is the proper strength. A teacupful of this liquid, put into the night-pan every time before it is used by the patient, renders the bowel discharge perfectly harmless. To disinfect the bed and body linen, and bedding generally, chloride of lime or MacDougall's powder is more convenient. These powders should be sprinkled by means of a common dredger, on soiled spots on the linen, and about the room, to purify the air. All articles of bed and body linen should be plunged, immediately on their removal from the bed, into a bucket of water containing a tablespoonful of chloride of lime or Macdougall's powder, and should be boiled before being washed. The privy, or closet, and all drains communicating with it, should be flushed twice daily with the green copperas

liquid or carbolic acid, diluted with water. In the event of death, the body should be placed, as soon as possible, in a coffin sprinkled with disinfectants. Early burial is, on all accounts, desirable. In towns and villages where the fever is already prevalent, the last rule should be put in force for all houses, whether there be fever in them or not, and for all public drains. As the hands of those attending on the sick often become unavoidably soiled by the discharges from the bowel, they should be frequently washed. The sick-room should be kept well ventilated, day and night. The greatest possible care should be taken with regard to the drinking-water. Where there is the slightest risk of its having become tainted with fever poison, water should be got from a pure source, or should at least be boiled before being drunk. Immediately after the illness is over, whether ending in death or recovery, the dresses worn by the nurse should be washed or destroyed, and the bed and room occupied by the sick should be thoroughly disinfected. These are golden rules. Where they are neglected, the fever may become a deadly scourge. Where they are strictly carried out, it seldom spreads beyond the person first attacked.

"N. B.—A yard of thin wide-width gutta percha placed under the blanket, under the breech of the patient, by effectually preventing the discharges from soaking into the bed, is a great additional safeguard."

On the Treatment of Scarlet Fever. By CHARLES T. THOMPSON,
M. D., M. R. C. P.

A FEW weeks ago Dr. Budd published an able paper on Scarlet Fever, and as he and I obtain similar results, though by different means, I am desirous of submitting a few observations on the subject.

Instead of waiting till the third or fourth day to anoint the patient's body with oil, and to repeat this twice daily, in order to retain *in situ* the infectious excreta from the skin, and after a longer or shorter interval washing this off in a warm bath, my practice is as follows :

On the very first access of the fever, I put my patient into a warm bath, and repeat this as often as the strength of the patient will allow or the severity of the attack may require. The first effect of this treatment is to produce a soothing and refreshing feeling in the patient, to be followed soon by such an eruption on the surface, of so vivid a color and in such amount, as would astonish those who have never witnessed it. Thus one of the greatest dangers of this fearful disease—the suppression of the eruption—is escaped.

After the first or second bath the appetite usually returns, so by getting down light and nutritious food the means are afforded

of supporting the strength of the patient during one of the most trying periods of the disease. By this treatment the excreta from the skin are removed as rapidly as they are deposited, doing away immediately with the source of infection, leaving no room for the dissemination of the disease. The desquamation of the cuticle is greatly promoted, it being removed in small particles, and never in large pieces.

The drying of the body after the bath is effected by soft linen cloths, sufficiently large to envelop the whole person, and with as little friction as possible; in fact, the surface is what may be called "dabbed" dry, as the excitement from friction of the skin often produces great mischief.

The irritation of internal organs is also at once relieved by this continued determination to the surface. And as the condition of the latter becomes more healthy, the nasal, renal, and alvine secretions, with those of the throat,—in my opinion the most dangerous of all,—are speedily deprived of their noxious properties, and quickly recover a healthy character, thus again removing additional sources of infection.

The fever rapidly subsides, and convalescence usually proceeds more or less quickly, according to the mildness or severity of the attack. Another advantage of this treatment is, that a very serious case is soon reduced to a mild one, and the patient recovers in less than half the usual time.

This practice I have pursued for more than fifteen years, during which period I have attended many cases of scarlet fever; but have never lost a single patient from this disease, nor can I call to mind at this moment any one case in which the infection has been carried from the patient to any other individual. I have had six or seven cases in a family at about one and the same time, the infection clearly traceable to schools, etc.; yet have never known the disease spread to any others in the same household. I have also attended cases where isolation was impossible, or would not be attended to, the patients having free communication with other members of the family, but where the treatment above recommended has been scrupulously carried out, no second case has arisen.

The consequence of all this is that, when the patient's health is sufficiently re-established, permission has been given to join the rest of the family; and I am satisfied that the patient might also be speedily restored to society with perfect safety. In no instance have I known any harm to arise from this permission. During the convalescence of the patient, the bath, of course, may be used daily, or every other day, according to the feelings or wishes of the patient; but its temperature should be gradually reduced, so as to invigorate and not exhaust, and also to enable the surface successfully to resist the alternations of heat or cold to which the patient may be exposed in moving about from place to place.

The terrible sequelæ of this formidable disease are, also, by

the treatment above recommended, seldom if ever met with. No nurse or washerwoman has, to my knowledge, suffered from the performance of her avocations. Of course the necessary medicines must be administered as occasion requires.

St. George's-road, Pimlico, Feb., 1869.—*Lancet.*

On the Administration of Hyposulphite of Soda in Ague and Typhoid Fever: By T. F. SANGER, M. R. C. S., Surgeon to the Convalescent Hospital, Seaford.

THE theory of the cause of ague and typhoid fever being due to the germs of a fungus having entered the system appears to me to be proved by the following case :

In the spring of 1868, I had a very intractable case of ague in a boy eleven years of age, which resisted all the remedies usually employed in the treatment of that disease, these being given until the boy said his stomach could not bear any more. Following out the fungus theory, I gave the patient a scruple of the hyposulphite of soda three times a day, which in a very few days got rid of the ague, and he has never had it since.

In the autumn, three sisters and the mother of the lad became the victims of a very bad tertian ague, which resisted the administration of emetics, quinine, bebeerine, and arsenical solution, but gave way to a very few doses of the hyposulphite of soda.

I have since tried the hyposulphite in a few cases of typhoid fever, and with beneficial results similar to those attributed to the sulphurous acid by Mr. Robert Hamilton in a paper on typhoid fever in the *Lancet* of Jan. 9th.

The hyposulphite of soda I administer in doses of from fifteen to thirty grains three or four times a day (according to the ages of the patients), in water, with syrup of lemon or tolu. It does not produce any nausea or relax the bowels.

I mean to administer the hyposulphite of soda in large and frequent doses to the next patient I have with diphtheria, and anticipate similar favorable results.—*Lancet.*

Pulmonary Emphysema in connection with Gout: By E. HEADLAM GREENHOW, M.D., F. R. C. P.

In a clinical lecture which appeared in the *Lancet* in 1867, I expressed the opinion that degeneration of the tissue of the lungs, resulting from some constitutional vice, not unfrequently leads to the spontaneous development of extensive pulmonary emphysema, and I adduced several cases in support of that opinion.

This form of the disease, however, which I then termed constitutional or substantive emphysema, for the most part advances very gradually, and is attended in its earlier stages by very slight inconvenience. It therefore seldom comes under medical obser-

vation until an attack of bronchitis, to which it strongly predisposes, has aroused the patient to a sense of his condition, by aggravating the shortness of breath, which had crept on so imperceptibly as to have been previously overlooked. As a natural consequence of these facts, cases of constitutional or substantive emphysema may be, as I believe they are, not rare in themselves, and yet very rarely observed or recorded. And hence, although an exclusively mechanical theory has of late years been generally considered insufficient to account for the origin of pulmonary emphysema, the existence of cough is, at the same time, still generally regarded as necessary to its causation. Additional experience, however, only serves to confirm the opinion I expressed two years ago, and to convince me that in a hitherto unsuspected number of cases, neither cough nor any other extraordinary cause of mechanical distension of the air-cells has been in action; but that the emphysema has resulted simply from the incompetency of the degenerated tissues of the air-cells to resist the ordinary pressure incidental to many of the occasions of daily life.

This view appears to me to be one of great importance in its therapeutical bearings; for when cases of bronchitis associated with emphysema come under treatment, the ulterior management of such cases will be materially guided by the opinion we may hold with reference to the cause of the emphysema. If it be regarded as a mere secondary result of the bronchitis, then our efforts will be exclusively devoted towards curing the existing attack of that disease, and warding off future attacks. But if, on the contrary, the emphysema be regarded as a substantive ailment, due to loss of tone and elasticity of the lung tissues, arising from some constitutional cause, we shall then aim further at retarding, by special constitutional treatment, the process of degeneration from which the emphysema has resulted. A brief record of a case of substantive emphysema, which has recently been under my care, may therefore perhaps be considered as not devoid of practical interest.

Francis Y., aged fifty-six, a bricklayer by trade, was admitted into the Middlesex Hospital, for acute gout, in November, 1868, under the care of my colleague, Dr. Thompson, who found, on examining his chest, that he was the subject of general pulmonary emphysema. As the patient positively stated that he had never had bronchitis nor illness of any kind attended by cough, Dr. Thompson invited me to examine him, and then transferred him to my care. I found no evidence of gout in his family history, but his mother and one sister had died of phthisis and a brother of psoas abscess. The patient himself was a tall, stout man, of florid complexion, and frankly admitted that he had for many years been a hard drinker, especially of porter. He had, nevertheless, been a perfectly healthy man until his first attack of gout, four years before his admission. He was now suffering from his fifth attack of regular gout, and he had also had sciatica and frequent flying pains in the lower limbs.

At the time of his admission he had acute gout in the ball of the right great toe and in the right index finger, besides which several joints in both hands were chronically enlarged and tender on pressure. The chest was broad and deep, and markedly hyper-resonant over both its anterior and posterior aspects; a perfectly clear note being elicited by percussion even over the praecordial region. The breath-sounds were feeble, and quite as audible below and around the left mamma as over any other part of the thorax. The vocal vibration was also very feeble. The Impulse of the heart could neither be seen nor felt in the normal situation, but it was seen beating freely in the epigastrium, where its sounds were also faintly audible. There was no cardiac murmur. The pulse was eighty, weak and compressible; the respirations were sixteen in the minute. The urine was acid, of low specific gravity, and perfectly free from albumen.

The patient was not himself conscious of any dyspnœa, and declared that he had never at any time suffered from cough; but I elicited from him that he sometimes raised, without trouble, a little frothy mucus after rising in the morning. He was discharged in December, when the gout had been relieved, and has not since been seen.

I have already, in the lecture referred to at the commencement of this communication, called attention to the large proportion of cases in which I have found a gouty diathesis subsisting in connexion with substantive emphysema; a proportion so large, in fact, that I have been led to the conclusion that an intimate relation often exists between the gouty dyscrasia and the loss of tone and elasticity in the lung-tissues, which leads to the development of pulmonary emphysema. The case just related is another example of this connexion; and although the gouty dyscrasia in this patient appears to have been acquired and not inherited, there is no reason to suppose that gout is less likely to predispose its subject to emphysema when it has resulted from long intemperance, than when it has been transmitted by hereditary descent.

—*Lancet.*

Remedy for Whooping-Cough.

AN experienced practitioner, in an article published in the *Canada Medical Journal*, says that the following prescription for whooping-cough is the best he has met with: R. Ammon. bromid. $\frac{5}{j}$; acid, hydrocyan. dil., ℥^{xx}; tinct. sem. stramonii, ℥^{xx}; water and syrup, $\frac{5}{iv}$. M. A teaspoonful three times daily to a child two years old will often relieve in twenty-four hours. Two to three grains of the bromide of ammonia may be given three times daily.—*Medical Record.*

Pertussis.

OPPOLZER says (*Wiener Med. Press*) narcotics and astringents appear to reduce the duration of the disease about one-half. Belladonna is probably the best, but simply because of its narcotic action. Tannin acts well in the third stage, or that of expectoration. In the case of children one or two years old, he began with pulv. rad. belladonna, gr. 1-12th morning and night, gradually increasing up to gr. 1-8th, or gr. 1-6th, taking the pupil as a guide. Emetics are only given when the bronchial tubes are filled with masses of mucus. To those who were arrived at years of discretion, he also gave sodæ bicarb. 3ss, in a tumbler of sweetened water, a mouthful to be swallowed just before an anticipated paroxysm, for diluting the phlegm. The following also acts well the same part:—

Rx Coccioneila, gr. v.—viiij.
Potassæ carbonatis, gr. x.
Aquaæ f. dest. f. $\frac{3}{4}$ j. M.

Sig. Give a tablespoonful every two hours.

Change of air is good, even if patient can be removed but a few miles. If this is not procurable, keep the patient in a room with an equable temperature. For the resulting anaemia use good diet. Dr. Link's extract of meat is good. Medicine may also be required.

In conclusion, it may be stated that of late many French physicians recommend the exhalations from lime which has been used in purifying burning gas, or, better still, gazéol. Oppolzer has had no experience with these remedies.—*Medical Press and Circular.*

Cure for Obesity.

DR. GIBB, of London, recommends the use of the bromide of ammonium to those who suffer from an excess of fat. When taken in small doses for a length of time it will absorb fat, and diminish the weight of the body with greater certainty than any other known remedy.—*Canada Medical Journal.*

Simultaneous Occurrence in the same Patient of two Acute Exanthemata.

TWO cases are adduced by Dr. Steiner, in the *Jahrb f. Kinderheilk.* 1868, in proof of what was formerly denied, the possibility of the occurrence at the same time of two acute exanthems in the same person. In the first of these cases there was a combination of variola and measles. On the fourth day of a febrile attack in a child, there occurred the indication of a variolous eruption—

namely, papulæ on different parts of the surface of the patient's body. On the next day the ordinary prodromata of measles presented themselves. By the eighth day both eruptions occupied the patient's skin; the measles especially prominent on the face. At the end of three weeks the child was entirely well. In the other case there was a combination of *measles* and *scarlatina*. After the usual prodromata there occurred the usual maculated exanthem of measles, and three days subsequently disappeared with a slight furfuraceous desquamation. At the same period, with febrile excitement, croupose angina, and nephritic affection, there was a diffused scarlet eruption upon the surface of the body, which at the end of three days gradually disappeared, and was followed by a lamellar desquamation. These cases are adduced by Dr. S. to show also that when two acute exanthemata occur in the same person, the second is always reduced below its ordinary intensity.—*Centralblatt f. Medicin. Wissenschaften*, Nov. 1868.—*American Journal of the Medical Sciences*.

Two Cases of Uncommon Haemorrhages. Medical Society of the College of Physicians, London.

PROF. LAW read a paper containing the details of two cases of uncommon haemorrhages. The first was that of a girl aged twenty-one, unmarried, suffering from amenorrhœa, great fulness in the head, severe cephalalgia, throbbing of the temporal arteries, intense coldness of the feet, and various other distressing symptoms. At various periods, she had very abundant haemorrhages from the lungs and stomach. The treatment consisted in the local application of leeches, the use of purgatives, astringents, of the hot pediluvium, etc.; and its effect for a long time was merely the increased interval between the attacks. She went to the country for some time, somewhat improved, but soon applied for readmission. The former symptoms had returned, accompanied by more distressing pain and fulness in the head, and especially in the ears, followed by *haemorrhage from the ears*, which gave great relief. She had three attacks of erysipelas. Finally, the menstrual flow returned, accompanied by an attack of diarrhœa, and from this time her health improved, and, after a time she was discharged, cured. There had been no return of the symptoms. The second case was that of a stout plethoric woman, aged thirty, who menstruated regularly; complained of pains in neck, shoulder and arm, followed by a sense of distressing fulness in the epigastrium, which was accompanied by nausea, and finally by severe hæmatemesis, which afforded temporary relief. Nine days after admission, the patient *bled freely from the eyes*. Dr. Law dwelt on the rarity of such cases, and pointed attention to the interesting fact, that while the first case occurred in a girl suffering from amenorrhœa, the second patient

menstruated regularly. Dr. Churchill gave the particulars of a case where, during pregnancy, haemoptysis to an alarming extent had taken place at the usual monthly periods. This recurred during a second pregnancy. Dr. Beatty regarded the cases as extremely interesting and uncommon; they should be looked on as examples of aggravated hysteria. He thought the true basis for treatment was to endeavor to restore the menstrual discharge. He extolled the value of leeches to the vulva, etc., and thought that in extreme cases the use of the galvanic pessary was to be advocated. Dr. Stokes had seen a great many cases, which, though not exactly the same, deserved to be placed in the same category. They were examples of a deranged nervous condition; they were not hysteria in the sense of being due to a lesion of the uterus. They were due to a neurosis; and this class of diseases abounded in phenomena truly "organic." He regarded them as "diseases gone mad," as it were; men and women were subject to them: and he found that there was hardly a symptom belonging to the organic lesions that might not be met with in such cases; their obstinacy and virulence were remarkable. He related a case in which, during recovery from typhoid fever, a most extraordinary serous discharge had taken place from the ear; its amount might almost seem fabulous, but he assured them of its accuracy; it had reached to several gallons, and was so great that it soaked through the bed, mattress, etc., and dropped into a vessel placed to receive it.—*British Medical Journal.*

QUARTERLY RECORD OF OPHTHALMIC AND AURAL SURGERY.

COLLATED BY W. S. MITCHELL, M. D., PROF. OF ANATOMY, AND OPHTHALMIC
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Fragment of Steel Discovered in the Retina by means of the Ophthalmoscope, Four Months after its Entrance into the Eye.

FEB. 13th, 1869. I saw Mr. F., whose left eye had been struck by a fragment of a steel-die four months previously. He described a considerable sub-conjunctival ecchymosis as having been the chief symptom observed at the time of the injury, and after this became reabsorbed, at the end of a few days, his eye had become, and still continues sufficiently good to allow him to resume his work of straightening blades of a machine, along which he takes sight with this eye as he has always done in preference to the other, this being as he has thought his best eye, and he being left-handed. He still reads a newspaper print with this eye, and reads No. xii. of test types at ten feet. Thinks it quite impossible that any fragment of steel can have entered the globe.

His pupil is somewhat dilated and immovable, and the iris has a darker color than in the other eye. By oblique illumination, a small cicatrix is visible in the sclerotica, in the region formerly the seat of the ecchymosis; but no opacity of the transparent media can be found. His field of vision is free from obscurity, except in a small space towards the upper and outer portion, where he does not perceive objects.

Examination with the ophthalmoscope the larger part of the fundus of the eye appears normal. At the lower and inner part of the retina, in the direction indicated by the obscure spot in the field of vision, and opposite to the scleral cicatrix, is to be clearly seen a small wedge-shaped fragment of steel, having its point imbedded in the ocular tunics, and a considerable part of its dimension standing out from the retina into the vitreous. No opacity of vitreous exists in its neighborhood. An agglomeration of pigment has formed in a small circle about it, and there is a faint appearance of choroïdal injection at one point only. The optic disc is slightly injected and its outline rather ill defined. This alteration, though having no apparent relation of continuity with the changes in choroid and retina in the vicinity of the foreign body, is yet a very important evidence of want of toleration of the presence of the steel within the eye, and is of interest as regards the question as to the mode of propagation of sympathetic inflammation from one eyeball to the other.—*Boston Medical and Surgical Journal.*

Mechanical Dilatation of the External Meatus of the Ear, with Compression of its Lining Membrane in Cases of Otitis Externa Acuta.

DR. J. GOTTSSTEIN, in the *Berliner Klin. Wochenschr.*, 1868, No. 43, contrary to the commonly received opinion that in diffused acute inflammation of the external meatus of the ear any attempt at forcible dilatation of the canal would most certainly augment the existing disease, recommends this very procedure for its cure if there be the least sign of contraction of the meatus. In two cases he trusted entirely the cure of the otitis to methodical dilatation and compression by means of tents of compressed sponge. In all cases of acute diffused *otitis externa*, Dr. G. recommends the introduction, as deep as possible into the meatus, of a conical shaped portion of pressed sponge, about 3.4 mm. long, and 2.3 mtn. in diameter at its largest end, to be kept constantly moistened by a few drops of lukewarm water; the sponge to be allowed to remain for from six to twelve hours, or even longer; the moistening with tepid water to be renewed at the end of every two hours. This latter is all important to facilitate the withdrawal of the tent. Its presence in the meatus gives rise only to a sense of distension; while in every instance, Dr. G. assures us, the symptoms due to the otitis rapidly diminish. When suppuration has taken

place, if slight, it will be found, we are assured, to be rapidly arrested. When the suppuration is of considerable extent, under the treatment by sponge-tents the pus can be allowed a ready discharge, the meatus kept clean, and, when called for, local remedies easily applied. In all cases treated as above, the course of the inflammation, we are assured, was cut short, in many with great promptitude.—*Centralblatt f. d. Medicin. Wissenschaften*, Dec. 1868.—*American Journal Medical Sciences*.

Visual Hallucinations.

A description is given by Naegeti, in the *Bayr. Acad. Sitzgsber* (1868, 1), of certain hallucinations of vision occurring in his own person whilst he was confined to a darkened chamber for many days, in consequence of an injury inflicted by fire on the cornea, especially of the left eye. The hallucinations were various in character, though they consisted mostly of landscapes, or the forms of persons, or of other objects. These hallucinations, in the course of N.'s observation of them, often underwent the most unexpectedly grotesque movements and changes; at other times they remained stationary. They appeared sharply and clearly defined, and remained long enough to allow of their careful examination—resembling, by no means, pictures produced by the painter's pencil, but gave the same impression as though they were, in fact, natural existing objects. N., during health, had never before been the subject of similar hallucinations. He believes they were seen by the left eye alone. It is true, that by rapidly opening and closing the lids of the right eye, the cornea of which had been slightly injured, there appeared before this eye another clear picture, which quickly vanished; the pictures which occupied the whole field of vision were produced evidently by the left eye alone. The hallucinations above described did not originate in any morbid excitement of the brain, nor certainly from any preceding impression upon the sense of vision; nor were they the least under the control of the will.—*Centralblatt f. d. Medicin. Wissenschaften*, Oct., 1868.—*Am. Jour. Med. Sciences*.

The remains of Pupillary Membrane in an Adult. By JAMES DIXON, F. R. C. S., Consulting Surgeon to the Royal London Ophthalmic Hospital, Moorfields.

THE following case appears to be worthy of record, as exhibiting a vestige of the pupillary membrane in a person of middle life. The persistence of any portion of this membrane, even in young persons, is a circumstance of extreme rarity. Dr. Cohn, *Klinische Monatsblätter für Augenheilkunde*, 1867, (p. 62) enters into an analysis of the cases published by different authors, and dismisses all of them except five as originating in a faulty diagnosis. He describes four cases from his own observation. I think there can

be no doubt that, in most of the instances reported, the old adhesions, the result of by-gone iritis, have been mistaken for shreds of the membrane pupillaris. This membrane is originally attached not to the free edge of the pupil, but to that portion of the iris which is marked, at some distance from the pupil, by a more or less elevated ring of little tufts or nodules.

In the summer of 1867, a lady, aged thirty, consulted me for short-sightedness. The case was a very simple one, the myopia not in any high degree, and suitable glasses were all she required. I noticed a fine hair-like thread running obliquely across the pupil of the right eye, and at once recognized it as a vestige of pupillary membrane. It gave the patient no inconvenience, and indeed she could not be made aware of its existence under any illumination I could apply. I had expected to find that, as the pupil dilated, while the two sides of the iris were held together by the little thread, the aperture would become irregular; but this was not the case to any appreciable extent. The iris, of a thoroughly healthy appearance, was of a rust-brown, and the filament was only a little paler in color. At each end it had a bifid attachment, and looked like a portion of the proper fibrous tissue of the iris drawn out into a thread. Under the ophthalmoscope, the media and fundus of the eye presented nothing unusual.

—*British Medical Journal.*

*Syringe for the Ear, Nostril, etc. : By J. RUSSELL LITTLE, M. D.,
Jamaica Plain.*

A CONVENIENT syringe, for the ear, nostril, throat, etc., may be made on the plan of the chemist's wash-bottle, as follows:—Take a bottle of convenient size, with a wide mouth; fit it with a good cork, which should be pierced with two holes on a line with each other, of a size to admit glass tubing No. 4 or 5 (this may be done with a proper cork borer, or with a bradawl and round file.)

Now take a piece of glass tubing, of size above mentioned, about five inches long, and bend it in the flame of a spirit lamp to a right angle, at about two inches from one end. Pass the short end through one of the holes in the cork. Another piece of glass tubing sufficiently long to reach from near the bottom of the bottle to one inch above the cork should now be passed through the second hole. Slip over the extremity of the latter tube a piece of rubber tubing, at the other end of which connect in the same manner a nozzle made of glass tubing drawn to a point in the flame of the lamp. The bottle being now nearly filled with fluid, and the cork and tubes adjusted air-tight, by blowing through the first tube a stream is forced through the second by the pressure of air on the surface of the fluid.

By fitting the spray tube in the place of the second an atomizer may be produced without the use of the balls and elastic tube generally used.—*Boston Medical and Surgical Journal.*

Peculiar Cyst Tumor of the Conjunctiva.

A BOY, aged six, had, some twenty months previously, in Feb., a stick thrust into the left eye. The mother states that a piece of the wood not larger than the head of a pin remained in the eye till July, and was then removed. There is now a tumor on the inner and upper side of the cornea, encroaching a little on the latter. It lies round the cornea as it were, is quite prominent, seemingly translucent, and looks like conjunctiva filled with serum. Although it was apparently based on the sclerotic, it evidently was not a staphyloëma of the sclerotic coat. With the idea that a foreign body might be within it somewhere, it was slit up, and the fluid, of a serous character, allowed to pass off. The bottom of it was found to be the sclerotic itself, and careful dissection revealed no foreign body. The patient was not again seen, as there was no other trouble with the eye. The chances are that it will again fill, unless some slight inflammatory action closes it from the bottom. No artificial irritation was attempted, as the sclerotic itself was laid bare. A similar case has occurred since.—*Boston Medical and Surgical Journal.*

Coloboma Iridis downwards in both Eyes.

A LITTLE girl, aged seven, has congenital coloboma iridis. The pupils are two-thirds of an oval, fortunately downwards, and therefore not covered by the lids. The patient, although a request was made, was not brought again for ophthalmoscopic examination, to ascertain whether the choroid was also imperfect. The pupils were nearly symmetrical, and gave the child a peculiar look, exactly as if a very careful and successful double iridectomy had been done, as for congenital stationary nuclear cataract. In such cases there is generally an absence of the choroid, the width of the deficiency in the iris, towards and nearly up to the optic papilla. This the ophthalmoscope shows very perfectly; the drawing of a case is to be found in the *Klin. Monatsblätter f. Augenheilkunde*, vol. v., p. 65. These cases show the anatomical relation of the choroid and iris. The retinal vessels are generally found running over the space where the choroid is absent, although vision is here deficient—i. e., the field of vision is defective over a space corresponding to this. This little patient was too young to attempt to obtain any examination of the visual field.—*Boston Medical and Surgical Journal.*

Acute Cerebral Symptoms supercressing in Chronic Disease of the Internal Ear—Death—Autopsy—Recent Meningitis—Encysted Abscess of Cerebellum : (Radcliffe Infirmary, Oxford.)

[THE following case illustrates well the impropriety of neglecting chronic diseases of the ear, and is an example of a termination by no means rare.—EDS.]

Frederick D., aged 15, was admitted into the Radcliffe Infirmary, under Dr. Gray's care, on August 12, 1868.

State on admission.—Very emaciated and weak. Intelligence rather dazed. Eyes apt to assume a fixed vacant stare; pupils large, rather sluggish, but equal; no squinting. Purulent discharge from meatus of right ear, and a large hole in its membrana tympani. Skin dry and harsh, but not hot. Tongue clean, rather dry at tip. Bowels open. Abdomen soft and retracted. Pulse 72, regular, weak. Heart and lungs seem normal. No paralysis of any part. The only complaint is of constant vertical headache, and of occasional sickness after food.

History.—From infancy up to four years ago subject to frequent pain and discharge in the right ear, which then ceased to recur. In the autumn of 1863 he was in the Infirmary, under Dr. Gray's care, for a mild attack of typhoid fever. Headache and slight delirium were such prominent and persistent symptoms during the fever that, but for the co-existence of a few decided rose-spots and powder-stools, his symptoms might well have been attributed to cerebral mischief. With these exceptions, he is said to have had fair, though weakly health, up to about a month before admission, when he began to lose flesh and to complain of headache and occasional vomiting. A fortnight ago, after a fall on his head, severe pain again attacked his right ear, and was followed in two or three days by free purulent discharge from the meatus, but with only slight and temporary relief to the headache. This, with occasional vomiting and great loss of flesh, has continued up to the present. Never had fits. Always considered of weak intellect.

Progress and Result.—For a week or ten days after admission the headache and vomiting abated considerably, then returned more violently than before. On September 13th he had an attack of epileptiform convulsions, which recurred on the 21st, and afterwards once a day up to the 25th, when, after two severe attacks, he died exhausted. His chief suffering all along was from the headache, which often came on in such violent paroxysms as to make him scream. Its seat latterly was always the same—viz.: a cross the forehead. During the paroxysms the pulse, which usually ranged from 75 to 80, was, on two occasions observed to fall to 50, remaining regular throughout. The discharge from the ear ceased after the 21st. Towards the last he had retraction of the head from tonic spasm of the muscles at back of neck, but no paralysis of any part.

Treatment.—During the temporary amendment, and for a few days afterwards, iodide of potassium and cod-liver oil; when convulsions began, free purging and a blister to the back of his neck; latterly, ice constantly applied to the forehead. A nourishing, but unstimulating diet, was given throughout.

Autopsy.—Brain: Flattening of the superficial lobes; scanty exudation of lymph at base, chiefly about optic commissure and Sylvian fissures; great distension of both ventricles with clear serum; softening of both optic thalami; no appearance of miliary tubercles. The greater part of the right lobe of the cerebellum was occupied by an abscess encysted in a pretty tough fibrous sac, and containing thick creamy pus. No relation beyond that of close proximity between this abscess and the disease of the bone presently to be described. Examination of the Os Petrosum (sections were made with a fine straw): A large hole was seen in the membrana tympani; the cavity of tympanum was filled with soft cheesy concretion, in the midst of which was found what was supposed to be the remains of the malleus, but no trace of the incus or stapes. The inner part of os petrosum, comprising the semi-circular canals, internal auditory meatus, and cochlea, quite healthy; necrosis (without disintegration) involving the whole thickness of its central portion between tympanum and cerebellum, but apparently stopping short of the mastoid process. The dura mater over the dead bone was somewhat softened and loosened from its attachment, but without any break in its continuity; a spot or two of purulent lymph was found between it and the bone at one place; no tubercle in either lung; abdomen not examined.

Remarks.—The sequence of events in this case seems to have been as follows; 1. Old disease of the internal ear at length become quiescent. 2. Depending upon this, but latent and of uncertain date, a cerebellar abscess. 3. From irritation subsequently originating in one or both of these foci-meningeal mischief at first slight—then 4. By a fall on the head aggravated and hastened to a fatal end. The possible latency of cerebral abscess is well illustrated in this case. How long the abscess had existed in this boy it is impossible to determine, but from the firmness of its sac it must have been of long standing, and yet the boy had all along been able to follow a light outdoor occupation.—*Medical Times and Gazette.*

Stillicidium Lacrymarum. By GEO. H. POWERS, M. D.

AN interesting case of this troublesome affection was brought to me recently by a physician of this city, which presented the anomaly of entire absence of the punctum in the lower lid. I was unable to find any orifice with a fine probe, or even with the point of a pin, and a strong magnifying lens failed to reveal the situation of even a capillary opening into the canaliculus. The

upper punctum and canaliculus were patent, as was evident from the comparatively small amount of the tears accumulated on the lid, but for two or three years the patient had been subjected to great annoyance from the residuum of the lacrymal secretion which the upper punctum failed to carry off. As the patient could not recollect any acute inflammation of that lid, of a serious nature, and as there was no sign of any pre-existing abscess of the lacrymal sac or duct, I thought entire relief would probably be gained if we could once open the canaliculus, and that the sac and duct would probably be found in a healthy condition. Accordingly I took up with forceps a fold of the tissues of the lower lid, near the seat of the normal punctum, taking care to include the calibre of the canaliculus, and made a transverse cut with fine scissors through it; through this opening the probe easily entered the canaliculus, and inserting a Bowman's director, the point of which was carried through the farther side of the sac, I slit up the whole length of the canaliculus, with a triangular, sharp-pointed knife. The sac and the nasal duct proved to be open and in healthy condition, easily admitting the passage of the probe; and already the difficulty is removed, and the tears flow through their natural channel.—*California Medical Gazette.*

Dr Galezowski's Binocular Strabomètre.

M. BECLARD presented to the Academy of Medicine of Paris on the 23d ult., a very ingenious and simple little instrument invented by Dr. Galezowski—a binocular strabomètre. Every surgeon knows how important it is, in the operation of strabismus, to measure with exactitude the degree of deviation as well as the precise result obtained by tenotomy. With the strabomètre of Dr. Laurence, which has to be moved from one eye to the other in order to compare the degree of deviation, this is often very difficult. The binocular strabomètre of Galezowski does not present the same inconvenience; the two needles, which slide in the sulcus of a screw, are easily placed opposite to the centre of each cornea; and by the divisions which are marked upon the horizontal bar, we immediately note the deviation. The instrument is composed of a horizontal branch, upon which slide two needles destined to indicate the degrees, and which place themselves opposite to the centre of each corresponding cornea. This transverse bar is held on a level with the eye-lids, the handle of the instrument upwards, and the fork of the bar against the root of the nose. On turning the little buttons attached to the extremities of the bar, the needles move from right to left and left to right, until each one is found to be opposite the centre of the pupil. The graduation of the transverse bar gives us the degree of deviation with the greatest precision. The handle of the instrument might be omitted, which would leave a mere horizontal bar, thus reducing it to the greatest degree of simplicity.—*Medical Times and Gazette.*

Tuberculosis of the Choroid.

IN the session for Dec. 9th of the Berlin Medical Society, B. Frankel reports two cases, where meningeal tuberculosis was diagnosticated by the aid of the ophthalmoscope. In the first case, that of a girl of six years, vision and consciousness remained unimpaired until death, and no subjective symptom that could prove the existence of meningitis was observed. The second case, in a boy of eight, was so far similar, that the physician "was enabled, from the appearance of the eye alone, to establish the diagnosis, which otherwise would have been entirely uncertain." Hyperæmia of the retina was observed, and, close to the papilla, a white, roundish spot of about one-sixth the diameter of the latter. Three other such spots were afterwards discovered, all fully exhibiting the characteristics of tubercles of the choroid. For four weeks the patient "made no complaint whatever of his eyes; he read, wrote and saw as usual, had neither sparks before his eyes, nor photophobia." "Six weeks after the diagnosis of general tuberculosis was made, appeared the first distinct symptoms of tubercular meningitis." "Both children, at the time of the discovery of the tubercles of the choroid, were in the possession of full consciousness, and showed no subjective symptoms referable to the eye." The tubercles were observed to increase in size as the disease went on; and the autopsy showed the presence of many others in the choroid which had escaped observation during life. The base of the brain presented the appearances characteristic of tubercular meningitis.—*Allg. Med. Central Ztg.*, No. 12, 1869.—*Boston Medical and Surgical Journal.*

MEDICAL NEWS.

Meeting of the American Medical Association: Reported by Dr. J. E. NAGLE.

FIRST DAY—TUESDAY, MAY 4, 1869.

Dr. W. O. BALDWIN, President, called the meeting to order at 10 A. M. The ex-Presidents of the Association were invited to seats beside the presiding officer. A special invitation was extended to Dr. Warren Stone, of New Orleans. Dr. Lopez, an ex-Vice President, was also invited and took his place on the stand.

The meeting was opened with prayer by the Rev. Mr. Galleher, of Trinity Church.

Dr. T. G. Richardson of New Orleans, Chairman of the Committee of Arrangements, followed with an address of welcome to the gentlemen of the Association. He paid a pleasant tribute to the amity which is cultivated in this Association. His reference to the general community of interest which binds the members

together from all sections of the land, which knows no political differences, and to the stores of our South, with its great floral and medicinal treasures, etc., were received with much applause.

The President announced the programme for the day's proceedings, and then the usual annual address followed, delivered by the President, Dr. W. O. Baldwin. The address was of a very polished character, filled with references to the excellence of the profession, and the annuities and courtesies which make it great and noble. Referring to the unity of its interests and aims which keeps its members from animosities and sectional differences, he paid a special tribute to the principles which actuate the members of the profession, regardless of aught but humanity and duty. He referred to the sympathies which bound them together in the bonds of a great brotherhood that knew no disruption of its Catholic spirit, during the sorrowful days of war and battle. Amid the shock of arms they stood above the differences that terrified the world with its horrors, the members of the Association practicing the beauties and charities that have ever made the brotherhood noble in all its endurance and christian practices. The remarks were received with much applause and listened to with profound attention.

The President referred to a question concerning a change in the system of medical education, which especially claims the attention of the profession, as well as the public. The loose method of turning loose on defenceless communities, illy instructed and incompetent physicians, demands a radical change. The system of cheapening the profession and lowering the standard that should be required for excellence and competency, demands careful attention, and is suggestive of prompt and decided action in correcting the system, so that incompetency may no longer rival the worth that opposes intelligence to quackery and ignorance.

A feature which the President referred to, regarding a change in the manner of schooling and graduating medical *alumni*, suggests that Federal legislation be invoked to change the present reckless system. The Association evidently was in accord with the proposition to secure governmental interference in lending aid in effecting so desirable a change.

The present facilities, which permit ignorant pretension to assume position in the profession, can only be remedied by the interposition of national legislation, and to it we look eagerly and anxiously for redress and change. How much the community should be interested in securing safeguards in this particular must be recognized by everybody who gives the matter a moment's thought.

The letters of absent members were next read by the Secretary, Dr. W. B. Atkinson. The letter of Dr. S. D. Gross, of Philadelphia, was first in order. Its broad catholic and kindly spirit was very handsomely received and applauded. A number of others

followed, and all breathed a warm spirit of social amity, as well as devotion to the interests and effectiveness of the convention.

Reports of committees on regularly appointed subjects were called for. Some additions and changes were made to committees. Dr. Antisell was added to committee on cultivation of the cinchona tree.

Several committees failed to report on the special themes which they were appointed to investigate.

On nurse training institutions, Dr. S. D. Gross, of Pa., reported a paper which was referred to committee on practice of medicine.

On commissioners to aid in trials, involving scientific testimony, reported by Dr. John Ordronaux, N. Y.; the paper was referred to committee on medical jurisprudence.

On devising a plan for the relief of widows and orphans of medical men, a paper reported by Dr. John C. Griscom, N. Y., was read, proposing a life assurance system, comprehending the mutual life plan. Several other propositions were announced. A peculiar feature was stated to be the fact, that in cities like New York the percentage of life was much more largely in favor of practising physicians than any other class of persons, who are engaged in business pursuits. Report adopted for publication.

On Annual Medical Register, a debate occurred with regard to its feasibility and expense. Dr. Packard reported its publication impossible for want of funds.

The Association accepted report of Dr. Mussey, of Cincinnati, Ohio, which proposed that each State Society be requested to furnish a list of its regular practitioners. Accepted and engrossed.

On the best report of treatment for the different forms of cleft palate, by Dr. J. R. Whitehead, of New York. Referred to Surgical Section.

On medical ethics, reported by Dr. D. F. Condie, of Pennsylvania. Read and received for publication.

The announcement that a meeting of editors of medical journals will be held this morning at nine o'clock, in the office of Dr. Mitchell, No. 1 Carondelet street, on important business, was changed to the Hall of Mechanics' Institute.

A number of volunteer essays for prizes were accepted and referred to the sections to which they properly belong for disposition.

Report of committee of last year on amendments, was specially referred, to report this morning at 10 o'clock.

Recommendation of Cincinnati Medical Association to appoint certain committees was adopted.

Received from Waco (Texas) Medical Society, and the Cincinnati Academy of Medicine, communications proposing reforms in the system of medical schooling, and establishing a better standard. Referred to regular committees of the proper sections.

SECOND DAY—WEDNESDAY, MAY 5, 1869.

The body met at 9 o'clock, Wednesday, May 5th, pursuant to order on adjournment, and proceeded promptly to attend to business, Dr. Baldwin presiding, Dr. S. M. Bemiss and Dr. Mendenhall Vice-Presidents.

The reading of the minutes were suspended.

There was a large accession in numbers to those who were in session on Tuesday, and an increased interest in the proceedings was apparent on the part of the gentlemen present.

Dr. T. G. Richardson proposed the names of several persons for membership. Being properly vouched for, the report was adopted, and the gentlemen received as members.

Dr. Eve reported a paper on canula-needle. Referred to Surgical Section. The Surgical Section was announced to be open to every one who desires to be present.

Reception of reports from special committees announced in order.

Dr. Buck, of Kentucky, offered the following:

Resolved, That a committee of five be appointed to report on the subjects alluded to in the President's address.

The President appointed Drs. Parvin, Toner, Pollock, Welsh and Seelye.

Dr. Richardson presented, an invitation from the Louisiana Ice Company, to the Association.

The rooms of the Academy of Science were also placed at their service.

Dr. McPheeters, of St. Louis, offered a paper from the faculties in that city, suggesting radical changes in the present system of graduating incompetent persons. Refers the fault to rivalry amongst the too many medical schools of the country. The paper was read by the Secretary and referred to the Committee.

Dr. Eve presented a memorial from the Medical Society of Tennessee on the same subject. Referred to same committee.

Dr. Gaillard offered a kindred preamble and resolution. Referred to same committee.

The Secretary, Dr. Atkinson, announced a report from Dr. Chas. A. Lee on Insane Asylums. Referred to Section on Psychology.

Report from Dr. S. D. Gross, delegate to British Medical Association, was read and referred to Publishing Committee.

The meeting proceeded at 10 o'clock to regular business.

Dr. Hibbard, of Indiana, proposed to add to article seven an amendment which better defined the article. Report adopted.

Dr. McPheeters, of Missouri, offered a communication from the Medical Association of that State in reference to medical education.

On motion of Dr. Toner, District of Columbia, it was referred to the special committee on that subject.

Dr. Eve offered the minutes of the Medical Society of Tennessee, which were similarly referred.

Dr. Gaillard, of Kentucky, offered the following preamble and resolutions, which were referred to the same committee:

Whereas, The medical teachers of America have, after a trial of twenty-two years, failed to meet satisfactorily and efficiently the requirements of the great body of the profession in regard to medical education; and

Whereas, The condition of the profession is yearly becoming more deplorable on account of the antagonistic and objectionable policy of medical schools, in making the amount of fees charged, rather than successful teaching, the basis of competition; and

Whereas, To obtain professionally competent graduates, sound and efficient teachers are indispensably necessary; and

Whereas, Such teachers, to be found throughout the country, cannot be induced to leave their homes without the assurance of competent remuneration; and

Whereas, Such remuneration can only be obtained by adequate fees charged, unless by a system of low fees the *number* of students be relied upon to make up the inevitable pecuniary deficiency; and

Whereas, Reliance upon numbers of students for this purpose deplorably crowds the already overcrowded professional field, diminishing thereby individual income, judgment, experience and skill, thereby compelling practitioners to resort to other avocations as a source of supplemental income; and

Whereas, This devotion to other pursuits destroys opportunities for study and improvement, degrading thereby the status and standard of American physicians; and

Whereas, The schools of New England, New York, Pennsylvania, Maryland, Virginia, South Carolina, Georgia, Alabama, Texas, Tennessee, Louisiana and District of Columbia now charge comparatively remunerative fees; and

Whereas, The low system of fees is charged only in a few of the Middle States, and can with advantage be made to conform with the rate of fees charged elsewhere; and

Whereas, It is as unethical for colleges to underbid each other pecuniarily as it is for practitioners to do so:

Resolved, That hereafter any medical school in this country, other than those fully indorsed, be entitled to representation in this Association, if the amount charged by such schools for a single course of regular lectures be less than one hundred and forty dollars.

Resolved. That all schools charging less than this sum are earnestly requested by this Association to advance their rate of fees to the amount mentioned.

The report of Dr. Lee, of New York, the delegate of the Association of Superintendents of Insane Asylums, was offered and referred to the Section on Psychology.

The report of Dr. Gross, of Pennsylvania, delegate to Foreign Medical Association, was presented, together with the letter to

Dr. Ehrenberg, was read and referred to the Committee of Publication.

The time having arrived for consideration of the revision of plan of organization, it was, on motion, taken up.

On motion of Dr. Hibbard, the following amendment to the constitution was adopted :

Add to Art. VII the following : " Provided, however, that when an amendment is properly under consideration, and an amendment if offered thereto, germane to the subject, it shall be in order, and if adopted, shall have the same standing and force as if proposed at the preceding meeting of the Association."

On motion, the following amendments to the constitution submitted last year, were adopted :

2d. *Members*.—In this section, second paragraph, fourth line, insert after the words "United States" the words "from the army and navy."

In fifth paragraph, third line, insert after the word "member" the words "or whose name shall have been, for non-payment of dues, dropped from the rolls of the same ; in fifth line (same paragraph) after the word "sentence" read "or disability;" in sixth line, after the word "society," add the following : "Or shall have paid up all arrears of membership ; nor shall any person, not a member and supporter of a local medical society, where such a one exists, be eligible to membership in the American Medical Association.

In the seventh paragraph, fifth line, strike out the remainder of sentence after the word "by," and insert the words "at least three of the members present, or three of the absent permanent members." In ninth line, after the word "delegates," add the words "except the right to vote."

In eight paragraph, fifth line, add after the word "delegates" the words "comply with the requirements of the by-laws of the Association."

In ninth paragraph, third line, insert after the word "must" the words "exhibit his credentials to the proper committee."

3d. *Meetings*.—In first paragraph, third line, strike out after the word "shall," the words "never be the same for any two years in succession, and shall."

After the ninth paragraph, insert the following new sentence : "Corresponding members shall consist of such medical gentlemen, eminent in their profession, residing out of the United States, as the Association shall, from time, to time elect."

4th. *Officers*.—In first paragraph, third line, after the word "Treasurer" insert the words "and Librarian." In second line, after the word "Secretary," strike out the article "and."

The following amendment was, after much discussion, unanimously rejected : In the third line, after the word "Librarian," insert the following new sentence : "The President shall be nominated and ballotted for in open convention, and shall be elected only from those who have attended at least five annual

meetings of the Association; and if, on the first ballot, no person receives a majority of the votes cast, the second ballot shall be confined to the three highest on the list; should no choice be then made, the candidate lowest on the list shall then be dropped. In the event of a tie on the third or succeeding ballot, the President shall decide by a casting vote."

After eighth paragraph insert a new paragraph as follows: "The Librarian shall receive and preserve all the property in books, pamphlets, journals and manuscripts presented to or acquired by the Association, record their title in a book prepared for the purpose, acknowledge the receipt of the same, and he shall be a member of the Committee of Publication.

5. *Standing Committees*.—In second paragraph, second line, insert after the word "members" the words "of whom the Assistant Secretary shall be one."

In the third paragraph, first line, strike out the word "and." In second line, after the word "Treasurer," read "and Librarian."

6. *Funds and Appropriations*.—In first paragraph, fifth line, insert after the word "the," the words "delegates and permanent." In the same line strike out the word "individual."

7. *Provision for Amendment*.—In the first paragraph, fourth line, strike out the word "members," and insert the word "delegates."

BY-LAWS—3. *Standing Committees*.—In second paragraph, ninth line, strike out all after the word "resolution."

In the third paragraph, fourth line, after the word "receive," insert the word "original." In same line, after the word "any," insert the word "medical."

In third paragraph, eleventh line, strike out the word "volunteer," and insert the word "original."

In sixth paragraph, second line, after the word "State," insert "and Territory." In fourth line strike out the words "our country," and insert the words "their respective States and Territories." In same line strike out all after the word "and," and insert the words "shall transmit them to the chairman of this committee on or before the first of April of each and every year."

5. *Assessments*.—In fourth line strike out the word "the," and in same line all after the word "expenses" to the end of the sentence.

In second paragraph, first line, strike out all after the word "invitation," and insert the following sentences: "Permanent members not in attendance will transmit their dues to the Treasurer. Any permanent member who shall fail to pay his annual fees for three successive years, unless absent from the country, shall be dropped from the roll of permanent members."

On motion of Dr. Davis, of Illinois, the amendment was amended as follows: "After having been notified by the Secretary of the forfeiture of their membership.

The amendment adopted as amended.

The following were adopted :

7. *Delegates to Foreign Medical Societies.*—In first paragraph, fourth line, after the word "Europe," insert the words "or other foreign countries."

10. *Of the Previous Question.*—When the previous question is demanded, it shall take at least twenty members to second it, and when the main question is put under force of the previous question and negatived, the question shall remain under consideration the same as if the previous question had not been enforced.

A recess of fifteen minutes was taken to allow delegates from each State to select members for committees on nomination.

The Permanent Secretary then announced the Committee on Nominations.

Dr. Chaille, Louisiana, submitted a proposition that a committee of four be appointed by the President to report as soon as practicable to the present session of this Association upon the following :

1. The propriety of adopting and using its influence to have adopted by the entire medical profession in the United States, the Provisional Nomenclature of Diseases, of the Royal College of Physicians.

2. On the practicability of having this nomenclature published in such manner as may render it easily and cheaply accessible to every member of the profession.

3. To recommend such other practical measures for the action of this Committee as may be necessary to introduce this nomenclature into official, military, naval, etc., and general use.

Dr. Woodward, U. S. A., reported that the Surgeon General, U. S. A., was favorable to this report.

The resolution was accepted and adopted.

Dr. Cochrane, of Alabama, offered the following amendments to the constitution :

That the second paragraph be stricken out ;

That of paragraph four, all shall be stricken out except the first sentence ;

That paragraph seven, of "Members by Invitation," be stricken out.

Laid over for session of next year.

The Committee on Publication reported through their chairman, Dr. F. G. Smith, of Pennsylvania. The Treasurer's annual report was read, accepted and referred to the publishing committee.

At 12 o'clock the special order of the day was taken up.

The Committee on Nominations was allowed to retire for deliberations.

Report on specialties and special advertising was read.

Dr. Sayre moved its adoption. On motion of Dr. Davis, it was referred to the Committee of Publication.

Dr. L. P. Yandell offered a resolution, which, after being amended, reads:

Resolved, That private handbills addressed to members of the medical profession, or cards in medical journals, calling the attention of professional brethren to the authors as specialists, be declared in violation of article four, section one, of the Code of Ethics of the American Medical Association.

A very considerable discussion ensued, which elicited much sharp and emphatic general discussion on the subject. The resolution was adopted unanimously.

Dr. J. R. Barnett, Mississippi, delegate from Vicksburg Medical Society, offered a resolution on irregularity, as applied to homeopathic practice, to derive the opinion and decision of this Association on the question of the regular members of the profession consulting with or endorsing men who base their practice on any special dogma.

A discussion ensued, after which it was declared to be the sense of the Convention that no regular practitioner should have any professional connection with persons who are irregular.

At one o'clock, P. M., the special order for the day was announced. A spirited discussion ensued on the acceptance of the report of Dr. J. M. Toner, chairman of the committee on establishing a library of American medical works. The report was accepted.

A proposition to make the Librarian of Congress custodian of the collection elicited much discussion, during which it was explained that the future protection of rare and valuable works was to be especially looked to in the selection of a safe and easily accessible position, and the appointment should be made to this view.

The resolution was adopted to place the books in charge of the Congressional Librarian.

The report on medical education, Dr. J. C. Reeves, chairman, was made the special order for reading at ten A. M. this (Thursday) morning.

No report on medical literature. Committee continued.

The Secretary read report from Dr. S. M. Bemiss, Dr. J. T. Scott and Dr. S. A. Smith, the members of the Committee on Prize Essays, stating that they had received two essays, and asking permission to present both papers to the association for the award of prizes of one hundred dollars each. The subjects are:

"The Physiological Effects and Therapeutical Uses of Atropia and its Salts;" by Dr. Robt. Bartholow, of Cincinnati, Ohio. The other, upon "Quinine as a Therapeutical Agent," by Dr. S. S. Herrick, of New Orleans. The report was accepted and adopted.

The paper of Dr. M. Schuppert, of New Orleans, on operations for vesico-vaginal fistula, were referred to the Section on Medicine and Obstetrics, for report on Thursday morning.

Motion by Dr. Davis to suspend the rules and have the sec-

tions henceforth hold their session at half-past three o'clock P. M., was adopted.

The Seeretary read a report from the Gynecological Society of Boston. Ordered to be laid on the table.

Dr. Booth offered a resolution that:

WHEREAS, The proper construction of article 4, section 1, Code of Ethics A. M. A., having been called for, relative to consultation with irregular practitioners, who are graduates of regular schools;

Resolved, That said articles excludes all such practitioners from recognition by the regular profession. Adopted unanimously.

The Association adjourned to meet at 9 o'clock A. M., Thursday May 6.

THIRD DAY—THURSDAY MAY 6, 1869.

Dr. Baldwin, President, in the chair. Dr. S. M. Bemiss and Dr. Mendenhall, Vice-Presidents.

On Dr. Parvin's report of Committee on President's Address, your committee desire to present the following report:

We cannot refrain before entering upon the consideration of the plan recommended by the President for the improvement of medical education, gladly expressing our high appreciation of the general tone of this address, of the broad and catholic spirit which pervades it, finding expression in earnest and eloquent words—in brief, we believe the address worthy the perusal of every member of the profession, in that it was worthy the memorable occasion, and is worthy the annals of medicine.

On the other hand, we cannot refrain, with sadness be it said, from acknowledging the truth of the terrible allegations made against the present condition of medical education, and the little success attending the efforts for improvements in such connection made during a score of years.

The special recommendation made by the President is in these words :

"I would advise that we appoint a committee of our wisest and best men to digest a plan for one or more National Medical Schools, and to memorialize Congress in behalf of the enterprise. Let the plan embrace as a basis the features presented by the Cincinnati Convention of Teachers; let these schools or universities confer such distinctions and privileges as will be proportionate to the superiority they demand, and such as will make the attainment of their diploma an object of the ambition of those who engage in the study of medicine; let the choice be open to all aspirants and the appointment or election of professors be so guarded as to secure the very highest talent, the most profound learning, with the most fully demonstrated capacity for teaching. Make the salaries of the professors large, and independent of the number of students; and let the Federal Government assume a proper share of the expenses incurred."

Your committee express their hearty approval of this general

plan, but suggest that the effort at first should be for the establishment of but a single school, as more feasible, and beside one such institution would be a model which other medical colleges might in time be induced to imitate in extent, duration and thoroughness of teaching, in rigidness of requirements for the degree of M. D.

We likewise desire to say that when the details of this general plan are thrown into form there should be the amplest security against the places and the power of such a medical college as designed ever falling into the hands of politicians or the proteges of politicians. Medicine is higher than politics, broader than political creeds or party platforms.

In conclusion, your committee reiterate the recommendation of the President as to the appointment of a committee for the special purposes referred to.

Drs. Parvin, Welch, Seelye, Tonor and Pollock, committee.

Dr. Hibberd moved acceptancy, was adopted, and on the proposition of Dr. Davis, the committee was ordered to consist of five. The President appointed Dr. F. G. Smith, of Pennsylvania; Dr. D. H. Storer, of Massachusetts; Dr. E. S. Gaillard, of Kentucky, and Dr. Joseph Jones, of Louisiana; and by motion, Dr. W. O. Baldwin, the President was added to the committee.

Dr. Palmer, of Michigan, submitted the following amendments to the by-laws, which were adopted:

Amend Section 2d of by-laws, by inserting in place of the clause after "6 Psychology," "each section," etc., these words: The President and Secretary of the several sections shall, like other officers of the Association, be nominated by the Special Committee of one member from each State represented at the meeting, and elected by a vote on general ticket. They shall hold their office until the close of the proper business of the annual meeting next succeeding their election, and until their successors are appointed.

Modify next paragraph to the effect that papers to be sent to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent to examine them with care, and with the advice of his section, to determine the time and order of their presentation, and give due notice of the same, and after their full examination and discussion by the section, they shall be sent to the permanent Secretary of the Association.

Papers presented directly to the Association, and other matters may, at the discretion of the Association, be referred to the various sections for their consideration and report.

The President appointed as Delegates to the British Medical Association :

Dr. N. Pinckney, U. S. N.

R. R. McIlvain, Ohio.

J. F. Hibberd, Indiana.

R. Lindsey, D. C.

G. C. Blackman, Ohio.

To the Canadian Medical Association :

Dr. Alden Mare, Albany, N. Y.

To the Committee on Ethics was appointed : Drs. Sayre, N. Y.; Tower, D. C.; Askew, Del.; Arnold, Ga.; McCloskey, Ala.

Dr. Hibberd presented handbill put out by Dr. J. B. Buchtil, of Terre Haute, Ind., and charged irregular practice in this conduct. Paper was read and referred to the Committee on Ethics.

Dr. Davis read report of meeting of editors, and presented the following from the Association of American Medical Editors :

To the American Medical Association : I have been instructed to announce to your honorable body, that those members of your Association in attendance on this annual meeting, after proper consultation have effected a permanent organization, with the title of "The Association of American Medical Editors." The objects of this organization are the cultivation of friendly relations, mutual assistance, community of effort and views, where possible, in system of receiving foreign exchanges, and sending our own journals abroad; concert of action in support of improvements in the present system of medical education, and of a higher standard of preliminary attainments for those who propose to enter upon the study of medicine; in proposing laws for the proper registration of births, marriages and deaths; in collecting the names of all the regular practitioners in the several States, and in promoting generally the value and efficiency of our periodical literature. The association thus formed is to hold its annual sessions on the day preceding the annual meetings of this body, and in the same localities. Dr. Mitchell, of New Orleans, is the Permanent Secretary, and Dr. J. B. Lindsley, of Nashville, Tenn., the Assistant Secretary. Congratulating your honorable body on the establishment of another organized power within the ranks of our noble profession, I remain yours, most truly,

N. S. DAVIS, Editor,

President of Association of American Medical Editors.

Referred to Committee on Publications.

The Secretary presented a paper from Dr. Walsh, of Georgia, referring to the action of the Georgia Medical Society in his case. Referred to the Committee on Ethics.

Dr. Gaillard, of Ky., explained the Kentucky troubles. No action.

Dr. Parvin read report of Dr. J. C. Reeves, on medical education, which had been made the special order for ten o'clock, A. M. Adopted and referred to the Committee on Publications.

Dr. McPheeters, of Missouri, offered a resolution that no speech should be longer than ten minutes, Adopted.

The Committee on Nominations—Dr. J. J. Woodward, U. S. N., Chairman, reported the following names :

REPORT OF THE NOMINATING COMMITTEE.

NEW ORLEANS, La., May 6, 1869,

The Committee on Nominations unanimously report as follows:

For President—Geo. Mendenhall, Ohio.

For Vice Presidents—Warren Stone, Louisiana; Lewis A. Sayre, New York; F. Gurney Smith, Pennsylvania; John S. Moore, Missouri.

For Assistant Secretary—Wm. Lee, District of Columbia.

For Treasurer—Casper Wister, Pennsylvania.

For Librarian—Robert Reyburn, District of Columbia.

Committee of Arrangements—Thomas Antisell, chairman, Robt. Reyburn, C. M. Ford, L. W. Ritchie, W. J. C. Duhamel, D. R. Hayner, D. F. Nally.

Committee on Publication—V. Gurney Smith, Pa., Chairman; W. B. Atkinson, Pa.; A. J. Semmes, Ga.; Robert Reyburn, D. C.; Casper Wister, Pa.; H. S. Askew, Del.; Wm. Maybury, Pa.

Committee on Medical Literature—J. J. Woodward, U. S. A., Chairman; W. H. Anderson, Ala.; Theophilus Parvin, Ind.; Hosmer A. Johnson, Ill.; C. W. Parsons, R. I.

Committee on Prize Essays—Grafton Tyler, D. C., Chairman; N. L. Lincoln, D. C.; N. R. Smith, Md.; G. W. Miltenberger, Md.; W. R. Dunbar, Md.

Committee on Epidemics—Add the following to fill vacancies: J. K. Bartlett, Wis.; J. B. Jackson, Ky.

Committee on Education—T. G. Richardson, La., Chairman; E. W. Jenks, Mich.; E. S. Gaillard, Ky.; W. M. McPheeters, Mo.

Time for meeting, in Washington, first Tuesday in May, 1870.

J. J. WOODWARD, U. S. A.,
Chairman.

The report was unanimously adopted.

Dr. Herrick, Louisiana, offered amendment to article on the duties of physicians to each other and the profession at large.

ART. I.—Duties for the Support of Professional Character—Proposed Amendment—Additional Section.

SEC. 5. The spirit of trade and of gain from merchandise should by all means be dissociated from the practice of a liberal profession, and it is important that practitioners should not allow their pecuniary interests to compromise their duties to their patients. Therefore, in cities and other communities where the services of competent apothecaries can conveniently be obtained, physicians should resign to them the whole business and profits of dispensing medicines.

Laid over to next yearly session.

Dr. Davis offered a report on various propositions and communications from medical societies, which were adopted and referred to the Committee on Publications.

Dr. Davis offered the following:

Resolved, That a special committee of three be appointed by

the President to present copies of the resolutions adopted before the several state medical societies at as early a period as possible. Adopted.

Dr. Chaillé, of Louisiana, chairman of committee, presented a report on medical nomenclature, which was received and adopted, and referred to Committee on Publications.

The Committee on the Nomenclature of Diseases have the honor to report that it has examined the "Provisional Nomenclature of the Royal College of Physicians" of London, and is of the opinion that it is desirable for this Association to recommend and adopt the same for general use in this country, with such modifications as, on deliberate consideration, may appear to be necessary. The following resolutions are therefore submitted :

1. *Resolved*, That a special committee of fifteen be appointed by the President to take this subject into deliberate consideration, and to report at the next annual session what alterations, if any, are necessary to adopt the proposed nomenclature to general use in the United States.
2. That this committee be authorized to fill up any vacancies which may occur upon it.
3. That the Committee on Publication be authorized to publish, for general distribution, one thousand copies of the English and Latin portions of this Nomenclature, under the designation of the proposed Nomenclature, prefacing the same with such remarks as may be deemed necessary to secure the criticism and co-operation of as large a number of American medical men as practicable.
4. That the Committee hereby appointed be directed to draw the attention of the Surgeon General of the Army, of the Chief of the Bureau of Medicine and Surgery of the Navy, and of the Superintendent of the Census, to the question of their official adoption of the proposed Nomenclature; to invite them to appoint whom they see fit to represent them on this Committee; and to solicit their co-operation as may be necessary to accomplish the purpose desired—viz: The final adoption of such nomenclature and classification as will receive the conjoint approval of the official Medical Bureaus of the Government and of the general profession.

STANFORD E. CHAILLÉ, M. D., Chairman.

Committee.—S. E. Chaillé, Louisiana; J. J. Woodward, United States Army; A. B. Palmer, Michigan; F. G. Smith, Pennsylvania; J. F. Heustis, Alabama.

The following Committee of fifteen was appointed :

Francis G. Smith, Chairman; J. J. Woodward, U. S. A.; R. F. Michel, Alabama; A. B. Palmer, Michigan; S. E. Chaillé, Louisiana; L. P. Yandell, Jr., Kentucky; Austin Flint, New York; Alonzo Clark, New York; Geo. B. Wood, Pennsylvania; S. H. Dickson, Pennsylvania; E. Jarvis, Massachusetts; Theo. Parvin,

Indiana; W. M. McPheeters, Missouri; E. M. Snow, Rhode Island; N. Pinkney, U. S. N.

Capt. Neal, of the steamer Richmond, invited the members to take an excursion at 5 P. M.

On motion of Dr. Garrish, of New York, thanks were tendered to Capt. Neal.

Dr. Garrish, of New York, offered a vote of thanks to the New Orleans, Jackson and Great Northern Railroad, for agreement to pass members back free. Adopted.

The thanks of the Association are also presented to the Morgan Line of Steamers and the Mobile and Ohio Railroad, for their courtesy in tendering free passes to delegates and members who return homeward by these lines.

Dr. Gaillard, of Kentucky, offered the following, with preliminary remarks:

Resolved, That the adoption of a uniform rate of collegiate fees (\$120 being the minimum) be accepted as the sentiment and desire of this Association.

Dr. Logan, of Louisiana, moved to amend by inserting \$140.

After considerable discussion the fees were placed at \$120.

Special Committee on the relative advantages of Syme's and Pirogoff's mode of amputating at the ankle—Dr. G. A. Otis, U. S. A., Chairman; Dr. J. D. Holloway, of Louisville, Kentucky.

Proposed by J. J. Woodward. Approved.

Dr. Bemiss presented from Dr. John Waters, of St. Louis, Mo. a paper on the Doctrines of Force—Physical and Vital.

Dr. A. M. Pollock, of Pennsylvania, presented this amendment to the constitution:

Resolved, That all county medical societies shall be required to elect a committee annually, whose duty it shall be to examine all applicants for admission as students under the tuition of its members, and that no member of any county medical society shall receive any such applicant until such applicant shall present a certificate from said committee, testifying that he has a good English education and a sufficient knowledge of Greek and Latin to enable him to pursue his studies with advantage.

Laid over under the rules.

Dr. Toner, District of Columbia, moved that a Committee on Variola be appointed, Dr. Joseph Jones, Chairman. Adopted.

Dr. Pinkney, U. S. N., made statements respecting relative grades of rank. The paper was ordered to be spread on the minutes.

Association adjourned to meet at 9 o'clock, A. M., Friday, May 7.

FOURTH DAY—FRIDAY, MAY 7, 1869.

The Association met at 9 o'clock, Dr. Baldwin in the chair.
Reading of the minutes omitted.

In yesterday's report, the paragraph which defines the rates of fees in Medical Colleges is corrected so as to read "the maximum

was established at one hundred and forty dollars, and the minimum at one hundred and twenty-eight dollars."

Dr. Joseph Jones, Louisiana, presented a number of specimens of pathology, anatomy and natural history. The explanations were very interesting and received with applause.

On motion of Dr. Garrish, of Kentucky, the thanks of the Association were tendered to Dr. Jones.

The following names were added to the Committee of Correspondence with State Medical Societies: Dr. N. S. Davis, Illinois; J. S. Weatherly, Alabama; Dr. J. M. Toner, District of Columbia.

To the Committee on Canadian Medical Association: H. F. Askew, Delaware; R. Miller, Alabama; J. M. Bush, Kentucky; N. S. Davis, Illinois; Riggs, Alabama.

To the International Medical Association: Dr. W. J. C. Duhamel, District of Columbia; Joseph Berney, Alabama; E. L. Jones, New York; B. F. Dawson, New York; Joseph Jones, New Orleans.

To the British Medical Association: F. A. Ross, Alabama.

Delegate to Association of Superintendent of Insane Asylums: Robert Reyburn, District of Columbia.

Dr. Jones was added to Committee on Establishment of National Medical College.

On motion of Dr. F. G. Smith, of Pennsylvania, the following resolution was unanimously adopted by a vote of the members present standing, as a mark of respect:

Resolved, That the thanks of the association are justly due and are hereby tendered to the President for the uniform kindness and courtesy with which he has presided over its deliberations, and to the Committee of Arrangements, the physicians and citizens of New Orleans for the generous hospitality and fraternal kindness with which we have been received and treated during our sojourn in their city, with the assurance that the memories of this visit will always be among the brightest and most enduring of our lives.

Resolved, That we also present our thanks to the various railroad and steamboat companies, who have so liberally extended to us facilities of transportation, and to the daily press for their efficient aid in reporting the proceedings of this meeting.

On motion of J. P. Moore, of Mississippi, the following preamble and resolutions were adopted:

Whereas, the contract system is contrary to medical ethics;

Resolved, That all contract physicians, as well as those guilty of bidding for practice at less rates than those established by a majority of regular graduates of the same locality, be classed as irregular practitioners.

The following reports of the sections followed:

Section on Meteorology, Medical Topography and Epidemics reported. Paper accepted and referred to the Committee on Publications.

Sections on Practical Medicine and Obstetrics reported and their reports were accepted, and referred to Committee on Publications.

The report on training of nurses was accepted and the resolutions adopted.

Section on medical jurisprudence, hygiene and physiology reported. Committee continued for next year. Report accepted and referred to the Committee on Publications.

Section on Surgery proposed that their report be received without formality, and be referred to the Committee on Publications. Adopted.

After being read, the report was accepted and ordered to be published.

Section on Psychology, the same disposition.

The President appointed Dr. J. M. Toner, a committee of one, at Washington, D. C., to assist the Librarian of Congress, to keep the books of the Association.

On motion for adjournment, the President delivered an address which was unanimously accepted and ordered to be published in the Transactions of the Association :

Gentlemen—Before I submit the motion just made, and which, when adopted will practically close my official relations to this body, allow me to return you my most cordial and grateful thanks for the unvarying kindness which I have received at your hands. Whatever my future lot in life may be, the world holds no honor which to me can equal those conferred by you. The fraternal good will which has so conspicuously marked your deliberations, has been to me a matter of infinite satisfaction and pride, and will not be the least among the grateful memories which will gladden my heart as I may hereafter review the incidents of my official connection with you.

To win your judgment and approval, to hold up the dignity of fellowship, the usefulness of association and the interest and prosperity of the profession at large have certainly occupied my most anxious thoughts since my elevation to this position, yet to cherish and promote the intimate and cordial relations of friendship between the individual members of this Association against all sectional distinctions or geographical lines has also been among the chief objects of my ambition and the earnest desires of my heart. Could I now believe that my efforts have contributed in the slightest degree to enlarging that harmony of sentiment and fraternal feeling which has been so apparent throughout this meeting, I should feel that I had commenced at least to make some return for the great honor and kindness received at your hands.

It now only remains for me, gentlemen, to again express to you my thanks, to wish you a safe return to your homes and labors, a happy reunion with your friends and families, and to pronounce that sad word over which the heart of friendship would fain linger, as I bid you an affectionate farewell.

W. O. BALDWIN, President A. M. A.

The Convention adjourned to meet in Washington, D. C., on the second Tuesday in May, 1870.

Convention of Medical Journalists.

PURSUANT to adjournment from the preliminary meeting on Tuesday, the meeting of Medical Journalists was called to order at 8 o'clock P. M., by Dr. N. S. Davis, of the Chicago "Medical Examiner."

The Committee on Organization, through their Chairman, Dr. Theophilus Parvin, of the Western Journal of Medicine, then presented the following preamble and plan of organization, which was unanimously adopted :

The editors of American Journals in the United States, desiring to cultivate professional courtesies, to facilitate the conduct and general management of our journals, to promote their interests, their usefulness, and make them a still greater power for professional and popular good, and especially to advance the interests of medicine, hereby unite together under the following

ARTICLES OF ASSOCIATION.

Name—The Association of American Editors.

Purposes—The cultivation of friendly relations, mutual assistance, community of effort and means, where practicable, in a system of receiving foreign exchanges, and of sending our own journals abroad ; in urging, with hearty concert, improvements in the present system of medical education, and a higher standard of preliminary education of those who desire to enter upon the study of medicine ; the collection of vital statistics ; the collecting of the names of all the regular physicians in the United States, age, place, and date of graduation, if a graduate ; also, the same in reference to graduation at literary institutions, if such graduation has taken place.

Meetings—These shall be held, commencing at 10 A. M., on the day preceding, and at the place of the annual meeting of the American Medical Association.

Officers—President, Vice President, Permanent Secretary, and Secretary.

The President, Vice President and Secretary shall be elected annually, and shall serve at the meeting of the succeeding year.

Committees shall be appointed where necessary for the carrying out of any of the special purposes of the Association.

These resolutions having been signed by the following delegates : Dr. N. S. Davis, Chicago Medical Examiner; Dr. Jas. M. Halloway, Richmond and Louisville Medical Journal; Dr. Wm. M. McPheeters, St. Louis Medical and Surgical Reporter; Dr. W. R. Bowling, Nashville Journal of Medicine; J. Berien

Lindsley, Nashville Journal of Medicine ; Dr. Greenville Dowell, Galveston Medical Journal ; Dr. Samuel Logan, New Orleans Journal of Medicine ; Dr. S. S. Herrick, New Orleans Journal of Medicine ; Dr. E. W. Jenks and Dr. George D. Andrews, Detroit Review of Medicine and Pharmacy ; Dr. W. S. Mitchell, New Orleans Journal of Medicine, and Dr. S. M. Bemiss, New Orleans Journal of Medicine—the officers, as follows, were unanimously elected :

Dr. N. S. Davis, President ; Dr. W. M. McPheeters, Vice President ; Dr. W. S. Mitchell, Permanent Secretary, and Dr. J. Berien Lindsley, Secretary.

The following resolutions were unanimously adopted :

That a committee on foreign exchanges be appointed, to consist of Dr. Parvin, as chairman, and the Permanent Secretary.

That the Permanent Secretary be instructed to correspond with such regular medical journals of the United States as are not now represented, informing them of the objects of the organization, and inviting their co-operation.

That a committee, consisting of Drs. Bowling, Dowell and Andrews be appointed on the Registry of Physicians.

That Dr. Halloway be appointed a Committee on Revision.

That the President deliver at the next meeting an address on the history, progress, etc., of Medical Journalism in this country, and that the members of the Association furnish to him such material and information as they may be able to obtain.

That beside the members already signing the constitution, all physicians connected with regular medical journals, be considered members upon signifying, in writing to the Permanent Secretary, their willingness to subscribe to the foregoing articles of agreement, until opportunity be afforded them of signing said articles.

That the President be requested to announce to the American Medical Association the formation and objects of this Association.

That these minutes be furnished to the secular papers, with a request that they be copied.

That Dr. Halloway be appointed a committee to arrange a general plan of commutation between medical journals.

That the Committee on Exchanges be instructed to arrange some general plan for the establishment of agencies in all the principal cities.

There being no further business the meeting adjourned.

Nomenclature of Diseases.

AT the last meeting of the Paris Academy of Medicine, the Minister of Public Instruction presented the Society with a copy of the new Nomenclature of Diseases published by the Royal College of Physicians of London.—*Lancet.*

EDITORIAL AND MISCELLANEOUS.

WE congratulate the friends of the American Medical Association, upon the positive success marking the late meeting.

In a scientific aspect, its chief legitimate end, it is supposed that the forthcoming volume of Transactions will prove not inferior to any hitherto issued. In a business point of view, that matter of res-gesta of secular and ethical character, the results are in some respects desirable consummations. In pleasant, social intercourse few meetings can have surpassed it.

For the benefit of many readers, who could not find opportunity to be present, we make the following editorial remarks in connection with the resumè of proceedings found on another page:

By looking over the list of reports of committees rendered and the titles of the papers to be included in the next volume, it will be seen that many of them are upon subjects of high professional interest. From the established reputation of some of the authors, we may expect the papers to possess great practical value.

The President's address was a fine piece of composition, and very admirably read. The subject of the address was the old topic of Medical Education. In discussing this question, both by the President and in open Association, the fact of the deficiencies of medical education was admitted by all parties. The points of difference elicited by the discussion were chiefly as to where the blame should justly fall. Most of the debators, including the President, thought the fault was with the Colleges,—“they are not sufficiently stringent in their requirements; especially are they too lax in their final examinations.” On the other hand the lay members of the profession are brought in for their share of the blame, by allegations charging that they receive into their offices, as students of medicine, young men without natural mental endowment—without preliminary education—and send them to the schools in such a crude state that even the most approved and vigorous grinding fails to convert such rough specimens of diamonds into jewels. There is no doubt but that the instances are altogether too numerous to permit the safe denial of either of these allegations, therefore, the question is not a very profitable one as to which party is most often in fault. Admitting human virtue to be equally liable to failure under similar temptations, the schools are unquestionably on the side where short-comings should be more common than among the laity. The pecuniary dividends of the schools are increased by every unit added to the lists of matriculates and also by every graduate. On the other hand, the amount paid as office tuition to the practitioner, seldom compensates for his inconvenience and loss of time. But after

all, it is in either one of the learned professions as in the mercantile world—the demand creates and rules not only the amount of the supply, but the quality of the goods furnished. Send the thoroughly educated young graduate to practice in a region where ignorance is so universal and deplorable that neither his learning can be appreciated nor his prescriptions be intelligently followed, and all spirit for further acquirements will be quickly extinguished. With this fact, however, the schools have nothing to do. It is their place to endeavor to compass the one question before granting a student his diploma—Is this man qualified to bring a reasonable degree of skill to the prosecution of his profession?

It may be likewise added, that in some of our cities, there is a spirit of rivalry between the faculties of different medical schools, leading to conduct more disgraceful than that commonly attributed to the keepers of opposition inns at railroad stations, or in villages. These shameless competitors endeavor to swell their lists by under-bidding other schools in the matter of tuition fees, and if they succeed, emblazon the fact to the world by saying that "the largest class of a number of years assembled at our school last winter." Is any intelligent reader willing to believe that the faculties of such schools—faculties who publicly offer to give all their tickets to a student for twenty to forty dollars, and perhaps take his note of hand for that paltry sum; is it not likely that faculties thus lowering themselves will also assure the student on his arrival that for the mere pleasure of his company he shall be rewarded with a diploma in the spring? We verily believe that it is not the matter of economizing in the tuition fees, comparatively so small an item of the student's expenses, which so often takes them to cheap schools, as the recognition of the fact that teachers who lower their fees to obtain patronage, will for the same purposes lower their standard of requirements. *In uno falsus; incertus in omnibus.*

The Association, by unanimous vote, declared its opposition to the policy which establishes cheap schools. The vote was a direct one, being upon the adoption of Dr. Gaillard's preamble and resolution, fixing \$120 as the minimum amount of gross fees. We say a unanimous vote, and think the statement strictly correct as it respects voices upon call of aye and no. But our readers must not take this lack of expressed opposition to imply that all the delegates present were opposed to cheap schools. Quite a number of delegates were present as representatives of schools with low fees. Some of them were strongly and avowedly opposed to the principle, but awaited co-operative action to effect its overthrow. Others unquestionably came prepared to defend and advocate the plan, but did not do it. Like Mr. Barkis, their lips were in whistling shape, but they did not whistle. It often occurs, however, that the most troublesome opposition is that which is characterized by silence. Our lack of expertness in physiognomy rendered futile our efforts to interpret the intentions of silent

delegates. One facial profile seemed sensibly to elongate like an evening shadow, but to our reading was blank of any fixed determination.

Although the colleges have never delegated to the Association any power to fix laws for their control, they cannot, nevertheless, ignore its influence as an index of professional sentiment at large. This, therefore, is the lever. The Association is an annual professional congress; supposed to represent from year to year the general voice of the profession. The success of the schools depends upon their propitiation of the general profession; ergo, it is at all events, better policy not to run headlong in opposition to it.

We are therefore curious to see what course will be pursued by the faculties of those cheap schools whose hopes of success are principally based upon this one feature, and who therefore determine not to surrender it. Will they openly thrust defiance in the teeth of the Association? Will they promise to comply with the resolution and yet contrive some device by which they avoid its spirit and intention? Every one recognizes the fact that two classes of political revolutionists have existed, and no doubt still exist, in this country. The one class seeks to overthrow existing laws by open force; the other, more astute and clever, makes large exhibition of loyalty, but escapes both the stringency of laws and the penalty of their violation by some subtle technicality or muddy strategy. It is the difference between the bad man who flatly refuses to pay King Cæsar his tributes, and the good citizen who meekly acknowledges the justice of the demand but pays in pewter, "African cowrie" or any other pinch-beck or pseudo currency which suits his own particular interest and convenience; the difference between the wicked law-breakers of one section, and those pious "*repertores doctrinarum*" of the other who understand so well the art of contriving laws which to themselves are mere cobwebs, but to others fetters of iron. In our opinion just precisely this classification will be found to obtain among the recusant schools. A few may refuse to advance their fees. Others will be seemingly swift to comply with the resolution adopted, but will in some adroit manner escape its force.

It may afford a considerable fund of amusement this year to scan the circulars and observe the evidences of "brain work" expended in tipping information to students that the increase of tuition from forty to one hundred and twenty dollars is after all nominal, not real. It is rather a nice point to make the hint so broad that the student will certainly apprehend it, and withal so delicate that there is room for discussion in regard to its being a direct violation of the resolution. As there is no law against making presents (not even in Maine, where two men may meet and each receive a present from the other, the one a dime and the other a glass of whisky), we suppose gratuities will be multiplied, and perhaps

whole classes rated as "indigent students" and admitted upon payment of one-third the fixed sum. When these, and all other irregularities of conduct in the management of medical schools shall cease, and they found their hopes of success solely upon the great merit of thorough and practical teaching, a most important step will have been taken in elevating the standard of medical education. We are full of hopes that such a day is not far distant. But after all the standard of medical education is quite equal in point of comparison to that of either of the other learned professions in this country, and if observations made in this theater be a fair test, is becoming day by day more satisfactory in point of respectability.

Our remarks must include some notice of the proposition to establish one or more medical schools under Federal protection. Exactly how this system is to be planned is as yet unstated, and perhaps undetermined. But indefinite as it is, the present drift of political tendencies gives it plausibility. Every thing which looks towards centralization, is now in the strong and sweeping current, and startles no discerning person. We have already a "stronger government." The tinkle of small bells is so common that it no longer discomposes our drowsy nerves. That much approved statesman, who, eight years ago, imprecated bloodshed and a stronger government, has lived to find his petitions granted. For these reasons, it is considered expedient to place the torch of science in the talons of the huge national bird whose wings overshadow a continent. We believe that science, like true religion, flourishes best when kept aloof from all government influence or connection. Of course our expression of opinion applies to these governments only with which we are best acquainted; those in which the rulers are chosen anew every few years, the choice being generally determined in great measure by questions of political expediency. However much one set of rulers might incline to the patronage of science and art, their tenure of office is too short to permit any considerable benefit to accrue, while their successors might undo all that had been achieved. But as the project is as yet so immature as to present no point for criticism, discussion must be deferred until the shapeless lump is licked into more positive form.

*"Nec catulus partu, quem reddidit ursa recenti
Sed male vira caro est, Lambendo, mater in artus
Fingit; et in formam, quantum capit ipsa reducit."*

The resolution offered by Dr. Yandell, and unanimously adopted, will not meet with general approbation or observance. We do not question the good intentions of the spirit which moved, or of that which adopted the resolution. If professors of orthopædic surgery, of genito-urinary diseases, of diseases of the mind and nervous system, of ophthalmology, etc., are to have their names and the title of their specialities sent every year broadcast over the country, are we to be told that the private specialist is to be denied all privilege to publish his card? We wish to be under-

stood, that in any claims for rights which we advocate for specialists, we restrict the term solely to those physicians of standard education and reputation, who devote their practice to a special disease or branch. The Association has no possible jurisdiction over any other special practitioners.

Specialism has been the great refuge of quackery, and it is both proper and necessary that all cards announcing special practice should be severely scrutinized. They have no more right to violate rules of fairness, dignity, decorum and modesty, than general practitioners. They have no more right to tack an appendix of references to their cards than the general practitioner, and this we regard as the broadest, least dignified and least to be tolerated of all violations of good taste and professional propriety. But while we rigidly exact adherence to all these demands, so long as we admit the propriety of multiplying chairs for teaching specialities in our medical colleges, and so long as we admit specialists on our professional platform, it is not just to attempt to abridge them in any ordinary professional usage.

The whole question of the means proper to be employed by the general or special practitioner, to bring his name before the public in a business connection, without violation of professional dignity and propriety, is complex and troublesome. The daily bread of the practitioner, and of those more dear than self, depends upon the information the people possess, first, of his presence; next, their impressions of his merits. We humbly confess that tact in giving information as to the former item, and in producing favorable conclusions as to the latter point is an element of success so important that the temptation to cast dignity and delicacy to one side and make these considerations paramount to all others is exactly proportionate to the meagreness of one's bill of fare, or, it may be in some cases proportionate to greed or commercial spirit and enthusiasm.

A plausible orator and worthy gentleman entertained the Association with a string of invectives against any advertisement of whatever shape, except solid publications, possessing such intrinsic merit as to commend the authors to the profession as high authority. He gave his remarks full emphasis by calling the Association to witness that he was willing to dispense with the services of his right arm should it ever be employed in writing any other character of advertisement, and even such as these must be published through channels exclusively professional.

One of the daily prints of the following Sunday contained an extract from a scientific report, made at the late meeting of the Association by this gentleman. We have not the least idea how it happened, but must presume that it did not occur with his knowledge; it is surely a coincidence rather curious. Now, in our estimation, there is no form of advertisement which is capable of being moulded to more selfish purposes, or exerts a more vitiating influence upon medical science than this: The great inundation of monographs and reports of startling cases and wonderful cures;

of old joints excised and new ones created ; of lethal diseases spirited away by the seeming enchantments of the reporters—has submerged our professional finger-boards and blotted out those land-marks and figures which governed our expectations as to the results of operations and cases. Let us be understood : We advocate the publication of monographs and of reports of cases, if this publication contemplates professional as well as personal benefit. But if it be done only as a means of advertising the author's acquirements and skill, be sure that the publication is attainted, either by an exaggeration of success, or by a suppressio veri as to ill success, which inflicts a serious injury upon the profession by damaging the integrity of its statistics. Let us endeavor to correct the evils of irregular and immodest advertisements by moral influences. We cannot accomplish this end by enacting new and more stringent rules. "Blue-Laws" beget hypocrites and engender unlovely tricks, called by a peculiarly unlovable name.

The Medical Editors Association will, in all probability, become an organization productive of much benefit. The medical press of this country has not been conducted in that catholic spirit which should characterize the periodic literature of a great and beneficent profession. Most of the journals are, or have been, organs of schools or publishing houses, consequently the energies of their editorial corps have been directed to these special ends, rather than to the dissemination of careful and practical information to their subscribers. The new association looks to the amendment of these and other defects, and seeks to give medical journalism more influence and position, and thus make it a surer and stronger staff for the support of the profession—especially of those so circumstanced as to be debarred from frequent intercourse with brother physicians.

We conclude with what may seem to some readers a remarkable historical lesson. The American Medical Association has met in the metropolis of the semi-barbarous people of the late slave States—among those fire-eating outlaws whose consciences have never been educated to the standard of human progress and personal saintliness attained by other tribes of Celestial Americans. But it somehow happened that the natives were on their good behavior, and, so far as we are informed, committed no act in the least degree offensive to the sensibilities of their visitors. The presiding officer, by his dignity, impartiality and business dispatch, shed lustre upon his position. The welcome of the Committee of Arrangements was in good taste. Not a syllable of a political bearing was uttered upon the floor ; no class legislation was attempted ; no tracts of doubtful scientific value, or of questionable morals, were authorized to be published and distributed under endorsement of the Association. The future may reveal that some things were done which had better been left undone ; but surely we have just reason to be proud of the above results and to hope that all future meetings will be equally successful and agreeable.

Organization of a State Medical Society.

THE following resolutions, offered by Dr. Samuel Logan, were unanimously adopted at the meeting of the Medical Association of New Orleans, held on the 2d of June:

WHEREAS, It is desirable for many considerations that the Medical Societies of the State should unite to organize a State Association; be it

Resolved, first, That the Medical Societies now existing, or which may hereafter be established in this State, are hereby invited to join us in the organization of a State Medical Society.

Resolved, secondly, That the various medical organizations now existing, or which may hereafter be established in this State, are hereby invited to send as many representatives as they may deem proper to meet delegates from this body in this place, on the first Monday in December next, at 12 o'clock M., for the purpose of effecting the proposed organization.

Resolved, thirdly, That the use of our rooms is hereby tendered to the delegates who may come in response to the above invitation.

Resolved, fourthly, That the President is hereby authorized to appoint five members to act as delegates to the proposed convention in behalf of this Association, who are hereby directed also to act as a committee for the purpose of taking such steps as they deem proper to bring the matter before the various medical organizations of the State and the profession at large.

The following members were appointed under the above resolutions: Drs. S. Logan, T. G. Richardson, S. Choppin, A. F. Axson and E. S. Lewis.

From the minutes.

J. W. CALDWELL, M. D.,
Recording Secretary.

THE attention of our subscribers and correspondents is again called to the fact that we do not return written receipts or rejected manuscript; nor do we answer any letters not referring particularly to our own business, unless the proper return postage is forwarded. No attention will in any case be paid to letters containing orders for books, instruments, etc., unless the proper funds accompany the letter. The business of the Journal being conducted strictly on a cash basis, we make no accounts.

THE amount of space necessarily taken up by the report of the proceedings of the meeting of the American Medical Association has compelled us to shorten our department of Excerpta, and at the same time has crowded out original articles from Drs. J. S. Weatherly, S. F. Starley and U. R. Milner.

IN order to carry out one of the most important purposes of the organization of the association of editors of Medical Journals (vide report of proceedings of meeting), the formation of a complete register of all regular American practitioners of medicine, we would earnestly call upon our friends to furnish us lists of practitioners in their neighborhood, adopting the following form, as suggested by our friend of the Western Journal of Medicine: Name, nativity, age. If a graduate of a literary institution, what institution, and when. Same of medical graduation. P. O. These lists we shall from time to time publish, and we hope our exchanges will by similar publications, as has already been promised by the Western Journal, aid us in our efforts to carry out the purpose in view.

BIBLIOGRAPHICAL NOTICES.

The Structural Lesions of the Skin, their Pathology and Treatment. Illustrated. By Howard F. Damon, A.M., M.D., Fellow Massachusetts Medical Society, etc. Pp. 225. 1869. J. B. Lippincott & Co., Philadelphia. A. Eyre & Co., New Orleans.

From Lindsay & Blakiston, 25 South Sixth st., Philadelphia:

1. The Science and Practice of Medicine. By Wm. Aitken, M.D., Edinburgh., Prof. of Pathology in the Army Medical School. Second American, from fifth enlarged and carefully revised London edition; adopting the new nomenclature of the Royal College of Physicians; with large additions, by Meredith Clymer, M. D., in two vols., with a map, lithographic plate, and numerous illustrations on wood. 1868. Pp. 2003.
2. A Treatise on the Eye; by J. Soelberg Wells, Prof. Ophthalmology, in King's College, London. Reprint. 1869. Pp. 741.
3. A History of the Medical Department of the University of Pennsylvania, from its foundation in 1765, with sketches of the lives of deceased Professors. By Jos. Carson, M. D., 1869. Pp. 227.

Pennsylvania Hospital Reports, Vol. II, 1869. Pp. 316.

The Use of the Laryngoscope in Diseases of the Throat, with an Essay on Hoarseness, Loss of Voice and Stridulous Breathing, in relation to Nervo-Muscular Affections of the Larynx. By Morell Mackenzie, M. D. London, M. R. C. P., etc. Second edition, with additions, and a chapter on the examination of the Nasal Passages by J. Solis Cohen, M. D., with two lithographic plates and 51 illustrations on wood. 1869. Pp. 289.



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S. S. HERRICK, M. D., and SAM'L LOGAN, M. D., *Co-Editors.*

Vol. XXII.] OCTOBER, 1869. [No. IV.

"*Tota philosophia frugifera et fructuosa, nec ulla pars ejus inulta ac deserta sit.*"—CICERO.

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N. B.—For further information apply to the Dean.

[Oct 1—tf.]

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FIG.I.

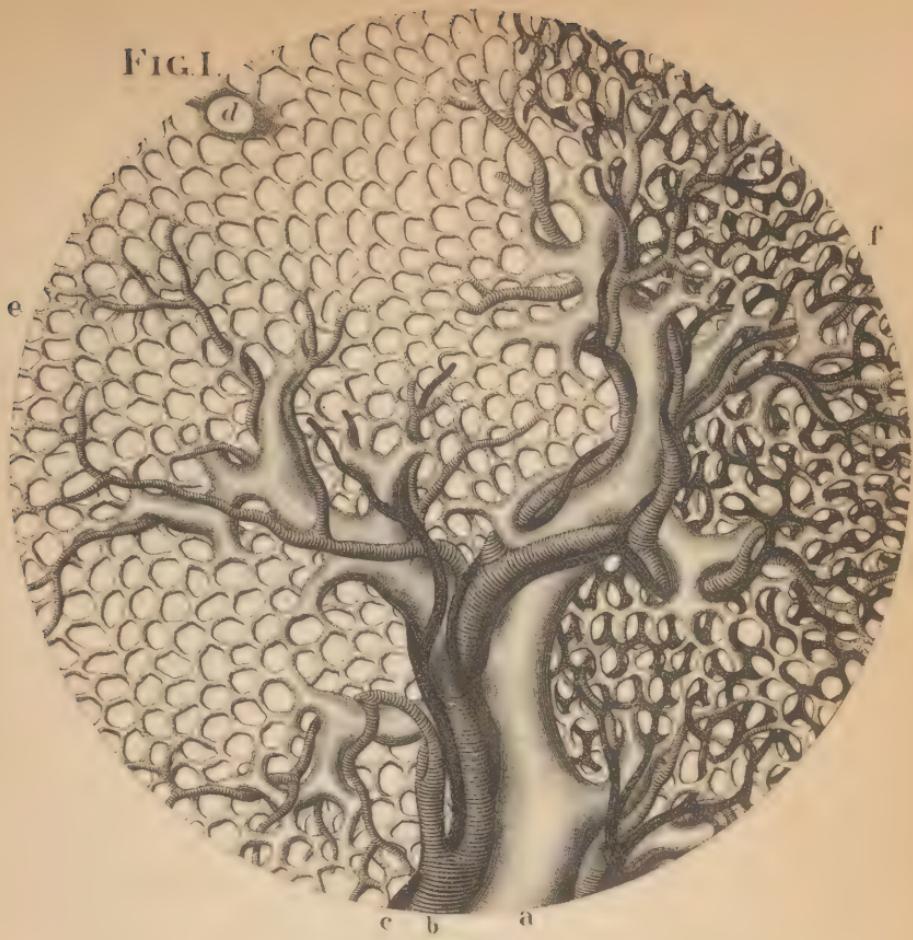


FIG.II.

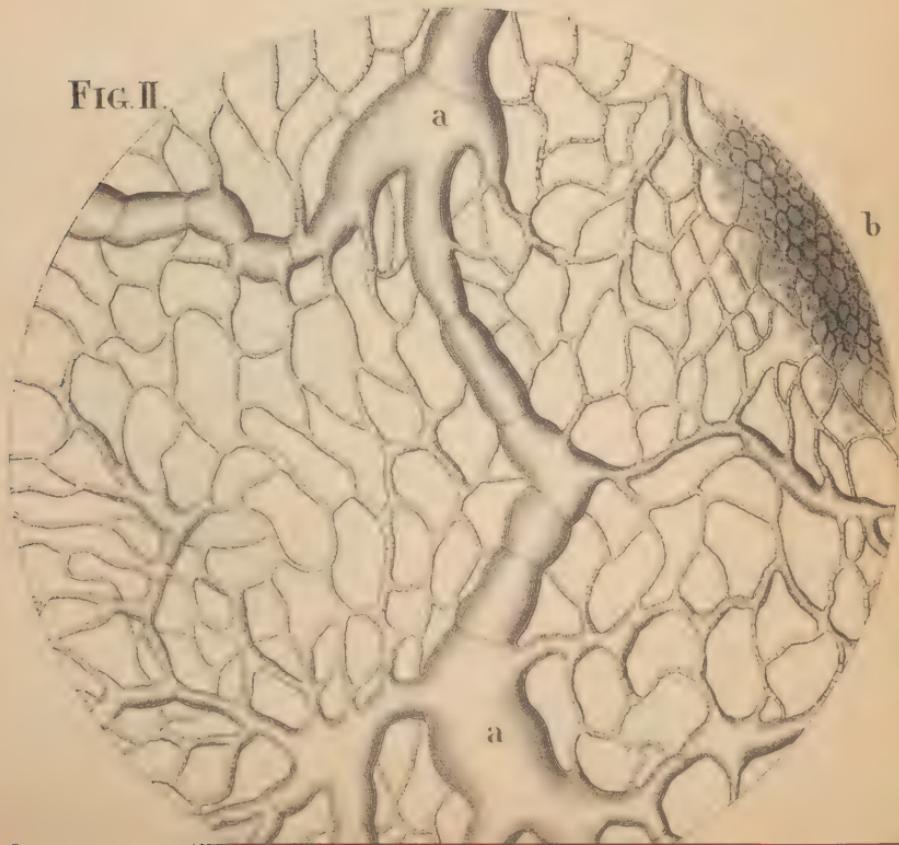


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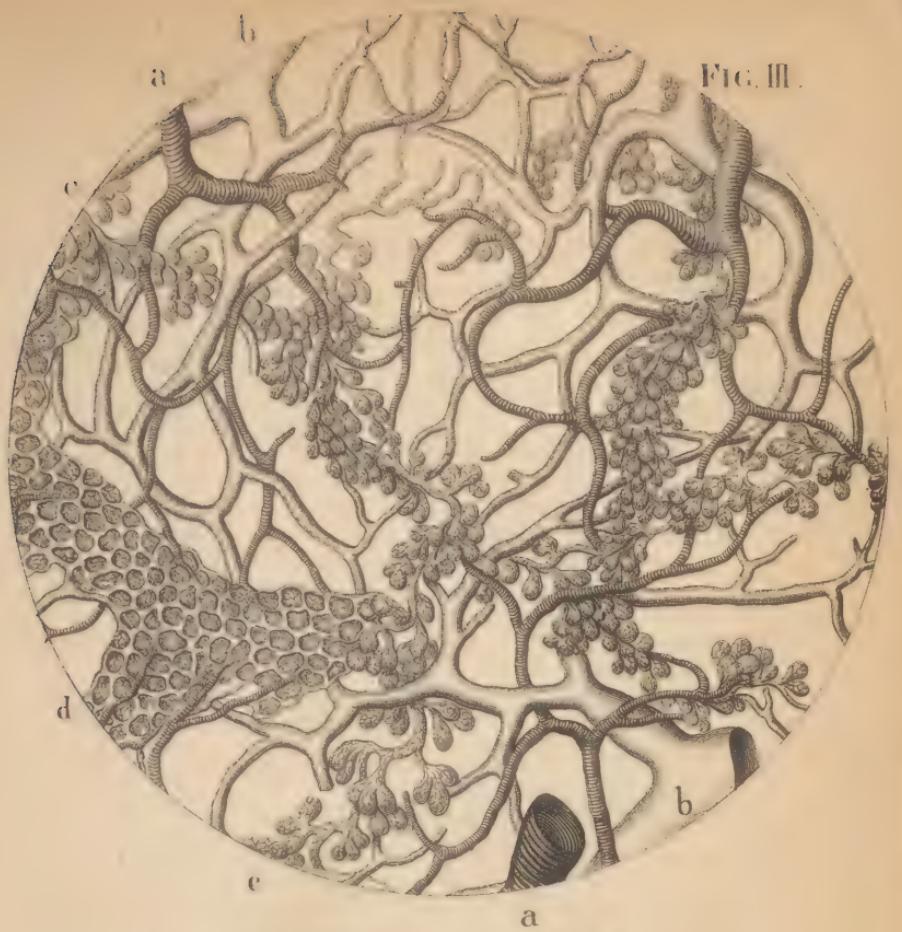


FIG. IV.



FIG.V.

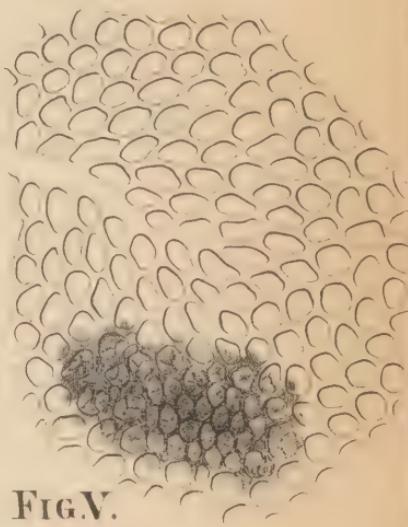


FIG. VII

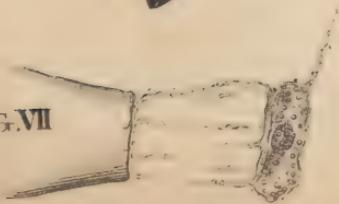


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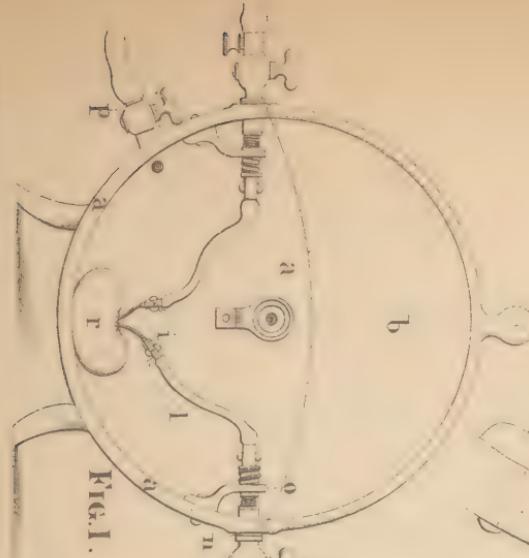


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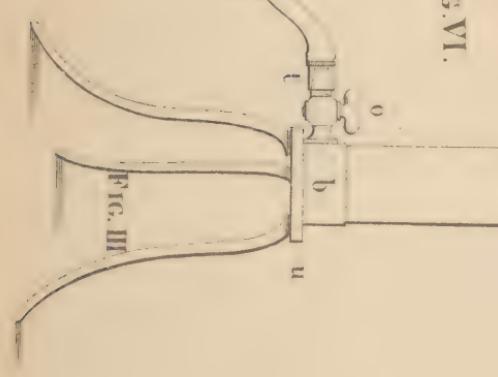


FIG. III

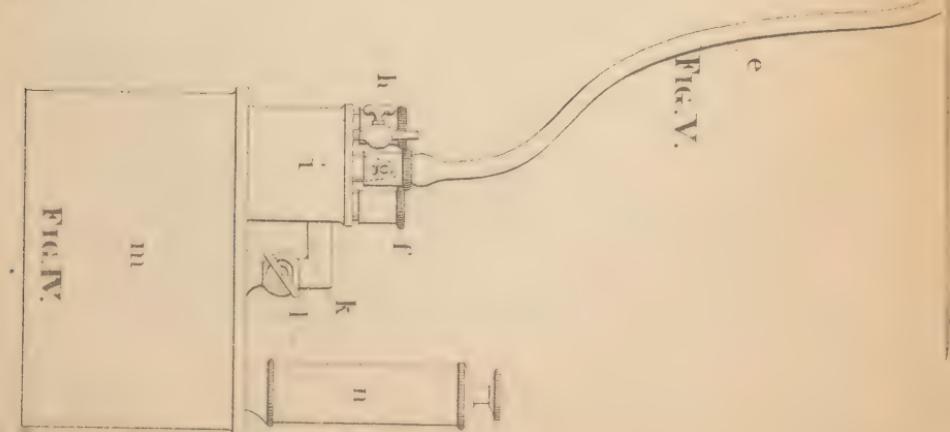


FIG. IV.



FIG. VI.

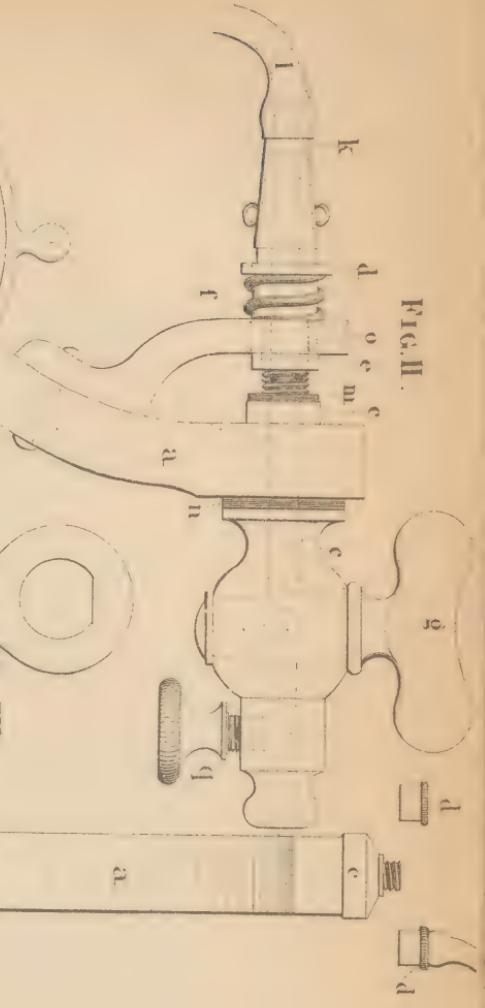


FIG. V.

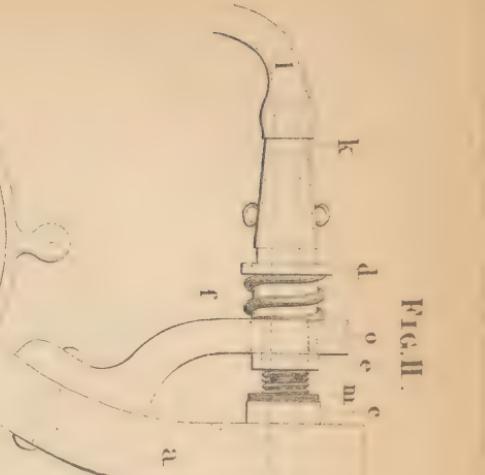


FIG. II.

THE
NEW ORLEANS
JOURNAL OF MEDICINE.

OCTOBER, 1869.

ORIGINAL COMMUNICATIONS. ✓

ART. I.—*On Septenary Periodicity* : By A. F. A. KING, M. D., of Washington, D. C.

A TENDENCY on the part of the organism to be affected in a particular manner at intervals of *seven days*, was fully recognized, as is well known, by most ancient medical authors ; though the existence of any such tendency has been pretty generally ignored by the moderns.

Now, if there is no such thing as “septenary periodicity,” upon what hypothesis are the facts collated in the ensuing pages to be accounted for ? Facts they are ; and I am disposed to present them without argument ; they speak for themselves.

It is designed, therefore, simply to call attention to certain functions and processes that exhibit unmistakable evidence of the septenary peculiarities under consideration.

We may begin by referring to certain processes appertaining to the reproductive system, viz : menstruation and gestation.

In natural, regular, typical cases of menstruation we find this process occurring every twenty-eighth day—the fourth multiple of seven. The interval is not simply called a month, or four weeks, for mere convenience of diction, but it is actually and exactly four times seven days. This is admitted by all writers on

obstetrics and physiology, and our daily observation confirms it. Discussion is unnecessary. But to show that the twenty-eighth day is not an accidental period, and that its being a multiple of seven days is not an indifferent circumstance, we may further remark, that in cases where the menses do not occur every twenty-eighth day, a day that is some other multiple of seven, will generally be the period of their recurrence. Thus, according to the researches of Mr. Robertson, of Manchester, (see Edin. Med. and Surg. Jour., vol. xxxviii, p. 237), out of one hundred women, in sixty-eight the menstrual discharge returned every twenty-eighth day; in twenty-eight every twenty-first day; in one every fourteen days; and in ten at irregular intervals. The same thing has been observed by others. Dr. Taylor remarks, (Medical Jurisprudence, p. 508), that "the most common intervals for the appearance of this function (menstruation) are twenty-eight and twenty-one days." In Dr. Tyler Smith's Lectures on Obstetrics, edited by Gardner, it is stated (p. 216) that "as a rule, the menstrual periodicity recurs every twenty-eight days. Others are regular every fortnight, or every three weeks; or the period returns only every five or six weeks." And again he observes (pp. 87, 88,) "cases are not uncommon in which the catamenia return regularly at longer or shorter intervals than twenty-eight days, some women being unwell every six weeks, others every two or three weeks, but there is generally *a tendency to observe some multiple of a week.*" "In some habits a leucorrhœal discharge constantly occurs and lasts for three or four days at the *fortnightly* intervals between the regular periods." (*Ibid.*)

Again it appears that the periods of "heat" in animals, which are held to be in some sort analogous to the menstrual epochs of the human female, manifest a like tendency to recur on days that are multiples of seven. "The ewe which remains unimpregnated comes in heat every fourteen days; the cow, and some apes, the mare, ass and buffalo every four weeks," (twenty-eight days.) (See Todd's Cyclopæd., vol. ii, p. 440.)

"Dr. Hille, a Dutch physician, of Surinam, possessed a female monkey which was the subject of a sanguineous discharge, lasting three or four days, every month." (Tyler Smith, p. 216.)

Acknowledging these statements, it seems almost impossible

to dispute the subjection of menstruation to the law of septenary periodicity.

Next of gestation. In normal or typical cases of pregnancy—those that have been unmodified by the influence of unnatural circumstances—gestation runs a definite course; its duration is fixed. The time of this duration is a multiple of seven days, viz., two hundred and eighty, or forty times seven. The very many instances in which gestation falls short of this period, or exceeds it, cannot alter the general rule that prescribes two hundred and eighty days as the *natural period*. All such exceptional cases, we may consider as anomalous deviations from the normal standard, resulting from the influence of unnatural circumstances that have been brought to act upon the female, either directly or indirectly, in such a manner as to produce some functional or structural modification of her reproductive system. Were we to regard such cases in any other light, we might be driven to the conclusion (with Prof. Taylor in his work on Medical Jurisprudence) that the period of gestation in the human female is unknown.*

Even should the anomalous cases exceed in number the regular and typical ones, which, it is reasonable to anticipate, at no distant day they *will* do, this need not affect the rule as to two hundred and eighty days being the *natural* gestative period; for while the majority of mothers, in highly civilized countries at least, are subjected to unnatural conditions, of one sort or other, that *must* cause the status of the reproductive system to deviate from its normal standard, it can hardly be otherwise than that the number of cases in which the gestative period is thus made to deviate from *its* natural limit should also be in the majority.

It would not be impossible, perhaps, to present evidence of a confirmatory character sufficient to prove that two hundred and eighty days are really the normal limit of the gestative period. I do not propose, however, to enter upon the discussion of so inexhaustible a theme; nor to analyze the various theories that have been promulgated with a view to make known what is the *primum*

* The fact is, the term has not yet been fixed even approximately by medical science. *
** It is at present hopeless to reconcile the conflicting medical opinions which exist on the subject of the duration of pregnancy in the human female." (Jurisp., p. 478, 7th Ed)

mobile of uterine contraction at full term. I take it for granted two hundred and eighty days are the acknowledged *natural* period of utero-gestation in the human female; it is sufficient for me to repeat that two hundred and eighty is the fortieth multiple of seven.

But to show that this period is not an accidental one, and that the periodic action of the uterus in expelling its contents is really influenced by the septenary peculiarities we are considering, I may next refer to thirteen cases of twin super-fetation (all that I have been able to find on record), in which it will be seen the second foetus was expelled, in the great majority of cases, after an interval that was a multiple of seven days.

The following list gives the authority for the cases referred to and the interval observed to elapse between the births:

No. of Cases.	AUTHORITY.	No. of Days.
	The first five cases are collated in Todd's Cyclop. Anat. and Physiol., vol. 2, p. 469.	
1.	Case of a living child delivered 139 days subsequent to a previous delivery. (Archiv. Gén. Tom. xii, p. 125).....	139
2.	A similar case related. (Archiv. Gén. Tom. xvii, p. 89).....	139
3.	Degrange mentions the case of a woman bearing two girls, the interval between them being 168 days. (Dict. des Sci. Med., Tom 53 p. 418)	168
4.	Fournier gives a case in which the interval between the births was 140 days. (Dic. des Sci. Med., Tom iv, p. 181).....	140
5.	Case given in Todd's Cyclop. without further reference; interval 109 days.....	109
	The next five cases may be found in "Meig's Velpeau's Midwifery, p. 237.	
6.	A lady named Dupuis, at St. Germain-en-Laye, had a miscarriage at four and a-half months, and four months after that gave birth to a healthy child, (28 x 4 = 112).....	112
7.	B. Franquet was delivered of a healthy foetus five months and sixteen days after she had miscarried of a seven months' pregnancy. (5 x 28 + 16 = 156).....	156
8.	Madame Bigaud brought forth one child on April 30th, and another on the 16th September following. (31 x 3 (for May, July and August) + 30 (for June) + 17 (for September) = 140	140
9.	Case of M. Rexain, in which the second child was born three months after the first. (28 x 3 = 84).....	84
10.	A woman at Arles was delivered of a full grown child in 1796, and of another in 1797, five months afterwards. (5 x 28 = 140).....	140
11.	Dr. Merriman's case of twins, in which the second child was retained fourteen days after the first. (Bedford's Obstet., p. 438)...	14
12.	Another by Merriman, in which six weeks elapsed between the births. (Ibid. (7 x 6 = 42).....	42
13.	Dr. Bedford's case of double uterus, in which a second child was born one month (28 days) after the first.....	28

Thus of the thirteen cases we have three, in which the interval between the births was 140 days (20 times 7); two others in which it was 139. These would seem to be deviations from the rule, but 139 is so near 140 that, allowing a little for some error or want of exactness in the calculation, we may safely place the two last cases with the three first, thus making five cases of the thirteen in which the interval between the births was 20 times 7 days. Of the remaining eight cases, one was 112 days (16 times 7); one 84 days (12 times 7); one 14 days (twice seven); one 42 days (6 times 7); one 28 days (4 times 7); while three others were respectively 109, 156 and 168 days. Of the thirteen cases, therefore, the time between the births was a multiple of seven days in *all except three*.

But still further to prove that the true limit of natural pregnancy in the human female is a multiple of seven days, we may next refer to the process of reproduction in animals, and in so doing we shall, it will be seen, substantially refute the idea (entertained by some obstetrical writers) that the duration of pregnancy is simply a multiple of the menstrual period; for the multiple of seven days is noticed with regard to the duration of gestation in animals which never menstruate at all.

In searching over various works on physiology, agriculture and natural history, with a view to ascertain the different periods *in days* during which animals carry their young, there has been great difficulty from a *want of exactness* in the statements met with. Thus we find it recorded that "the period of pregnancy in the ass is about eleven months; in the hind between eight and nine months; in the doe above eight months; in the guinea-pig never more than five weeks; in the elephant about two years; in the wolf over one hundred days; in the lion five to six months; in the reindeer above eight months."* A number of others might be enumerated, but they are mentioned here simply to show the necessity of excluding them from any further consideration.

Another difficulty has been a *want of agreement* on the part of different observers as to the duration of gestation in the animals generally embraced in farming stock. In these, however, we must remember breeds have been mixed, and the animals have

* Natural History, by Richard Cope, L. L. D.

been subjected to an unnatural life in a variety of ways, calculated to modify the period of pregnancy, just as we have seen it is frequently modified in the female of our own species. Many of *these* therefore—*i. e. domesticated* animals generally—must be left out. The records in regard to them are not fixed enough to give us the duration of pregnancy *in days*.

There are, however, on record, observations of a more fixed and certain character, sufficient at any rate to give probability to the idea that the duration of gestation is, in *all* animals, a multiple of seven days.

In the oft-quoted observations of Tessier, in which he noticed the duration of pregnancy in 160 cows, the result was as follows:

Fourteen were	delivered between the 241st and 266th days.
Three "	" on the 270th day.
Fifty "	" ON THE 280TH DAY.
Sixty-eight were	" FROM THE 280TH TO THE 290TH DAYS.
Twenty were	" on the 300th day.
Five "	" on the 308th day.

These statistics would seem to establish that the natural gestative period in the cow is 280 days (40 times 7.) On that day we have 50 delivered, and during the following ten days 68 more. But since it is more than likely—though no statement is made to that effect—that *most* of the 68 cases occurred nearer the 280th day than the 290th (probably on the 281st, 282d or 283d), this would give us 116 of the 160 cases occurring either *on* the 280th or during the next few days immediately succeeding it. Moreover, let it be observed, that on no single day given in the record were there as many deliveries (*viz.*, 50) as on the 280th. There is little doubt, therefore, that 280 days (40 times 7), is the *normal* period of gestation in cows. I may here mention that the whale also, which, by the by, belongs to the mammalia, carries her young 280 days. With regard to the horse, sheep, hog and most other of the domestic animals, no exact period *in days* can be determined. All naturalists agree, however—and they all employ the same exact expression—that gestation in the dog lasts 63 days (9 times 7), and in the cat 56 days (8 times 7). In the fox also there is no disagreement: naturalists set down the gestative period at 42 days (6 times 7.) In fact, so far as our researches have extended, *no* case has been found in which, when the period of preg-

nancy was positively ascertained with precision, the number of days was intermediate between two multiples of seven.

Even if we take into consideration the period of incubation in birds, the same peculiarity is met with. Most of us are aware that the common hen sits on her eggs 21 days, and the duck 28 days. The eggs of the goose are stated by different authors to hatch in 28 days, 30 days and six weeks—from analogy we should be inclined to adopt the first statement. The swan incubates 42 days (Aldrovandi). Aristotle and Pliny give the incubative period in the peacock 26 to 27 days; according to Bingley it is 28. In the crow it is 20 days (Hesiod), very near 21; also in the nightingale 20 (Buffon). In the pigeon it is given by several observers as 15, 17 and 18 days. In the linnet it is 14 days (Willoughby). In the canary 14 days.—(A Treatise on Birds). In the goldfinch fourteen days (Buffon.) In the common sparrow a number of naturalists state the period of incubation at 14 days.

In many instances the incubative term of birds, like the gestative period of animals, is stated by naturalists without precision; and in some it is given differently by different authors. It must be admitted also that in not a few instances the period is set down as a number of days intermediate between two multiples of seven, but in nearly all such cases the number comes nearer to the septenary multiple than it does to the middle day (*viz.*, the 4th) between two sevens. Thus the eagle and turkey are said to incubate 30 days—the latter, by some authorities, six weeks; the parrot, 40 days (Wolmaer). The pheasant 20, or 25; the bustard, about five weeks (Loudon's Encyclopaedia of Agriculture); the stockdove, 15 days (Cope). The discrepancy of opinion among authors in certain cases may be well illustrated by the instance of the common hen, which Buffon says incubates 17 or 18 days, though the period is universally *known* to be 21 days. It may be said, however, as any one can prove by examining the subject for himself, that no other number multiplied will strike so many of the stated incubative periods as the figure seven.

Probably there is no animal of the insect kind whose physiology has been studied more closely than that of the common honey-bee, and curiously enough we here find the same septenary pecu-

liarity. Goldsmith tells us that "in twenty-one days after the egg was laid the bee was completely formed." Again, in Dr. Gaidner's Dictionary of Agriculture, it is remarked that "the moth eggs hatch in 15 days," very near 14; that they "change to crysalids in spring, and in twenty-one days after this change come out moths."

I present these observations to be taken for what they are worth. Do they not tend to establish the fact that septenary periodicity belongs to pregnancy and to incubation, just as we have shown it to belong to menstruation?

In attempting further to demonstrate the existence of septenary periodicity, we leave the province of physiology—for, besides reproduction, none other of the *normal* functions seem to exhibit it—and direct our explorations into the domain of pathology.

The processes of disease that appear to be most under the influence of seven-day periods, are the continued, intermittent and exanthematous fevers. It is not designed in this place to attempt any extended discussion on the old question of "critical periods" in fever, or the mode in which febrile diseases are said to terminate by "critical discharges." What I propose to show is simply that the *duration* of these affections, when running their natural course, is seven days or its multiple.

But, first, it should be observed that any case of fever belonging to either of the three classes named above, may be either a *normal* or an *abnormal* case—a *natural* or an *unnatural* one. This expression we will at once explain. It is well known, with regard to febrile diseases generally, that they follow a fixed standard or type; they run a definite course, and have a specified duration. Now when any given case is found to agree in these particulars with the typical standard, it may be called a typical, normal, or natural one; while when—from the operation upon it of untoward influences—the case is made to deviate from the fixed type, it may be called a modified, deformed, or unnatural case. Thus, for example, the course and duration of a normal or typical case of typhoid fever lasts twenty-one days, but it may be modified by circumstances so as to be more or less than that period, just in the same manner as we have seen the two hundred and eighty days of normal pregnancy may be increased or decreased by certain conditions brought to act upon it.

In the majority of cases—the natural ones—septenary periodicity is well defined; it is only in the unnatural or modified ones—which are comparatively few—that the septenary rule is departed from.

With regard to the intermittent and continued fevers, septenary periodicity has been noticed and recorded by so many reliable observers, and its existence has been recognized and defended by so many able writers on fever, that almost anything we could add would be perhaps superfluous. These therefore will receive but a brief consideration. First of intermittent fever. On this we need not dwell long. The duration of the disease, when left to run its natural course, is not generally known, for unlike all other fevers, it is one the course of which we are able to cut short by proper medication, and hence but few cases are permitted to exhaust themselves *per via naturalis*.

Evidence, however, is not *entirely* wanting to indicate a multiple of seven days as forming the limit of the disease when its natural progress is not interfered with by art. Thus Dr. Forry—as quoted by Dr. Bartlett—uses the following language:

“That intermittent fever has a tendency to a septenary revolution is a fact that was frequently verified in Florida, under the writer’s observation; and that too in a manner so unequivocal, that it attracted the notice of the common soldier. At these septenary periods, either after the seventh, fourteenth, or twenty-first paroxysm, *the disease has a tendency to terminate spontaneously.*”

We may here further call attention to the well known fact that when the paroxysms have been checked by artificial means, they recur either on the seventh day from the last paroxysm, or on a day that is a multiple of seven, viz., on the fourteenth or twenty-first. As a general rule quotidiants tend to relapse on the seventh day, tertians on the fourteenth, and quartans on the twenty-first. The septenary periodicity of ague therefore is manifested both by the periods intervening between successive attacks, and by the total duration of the complaint when allowed to terminate spontaneously.

With respect to relapsing fever, which is very near akin to intermittent, septenary periodicity is well defined. In 1741, Rutty described this disease as a fever altogether without the

malignity of typhus, of six or *seven days* duration and terminating in a critical sweat. In 1800 and 1801, there was an epidemic of this fever in Ireland, also in 1816, '17, '18, '19, and '20, when it was described as generally terminating on the fifth or seventh day by perspiration; but on the fifth to the eighth day, (the medium being seven), from this apparent convalescence the primary symptoms return. It was also observed that death took place, if at all, *before the seventh day* of the disease. Thus its duration in model or typical cases was seven days; those longer or shorter than this period being either anomalous ones, or else having their duration erroneously recorded. The fact that death took place, if at all, before the seventh day, corroborates this statement. *On the seventh day the disease was at its end; after that time there was no reason the patient should die.*

But to clear up any doubt as to the correctness of these remarks, and at the same time to give the duration of two other forms of continued fever, I may here be allowed to quote from one of our most reliable authors, Dr. Watson, of London. In discussing the points of diversity between relapsing, typhus, and typhoid fevers, he remarks:—

“One striking and obvious difference is to be found in their respective duration. This is apparent even to the observation of the vulgar, who have thus drawn rude distinctions between the different epidemics, before they were recognized or acknowledged by the scientific physician. They talk of the one-and-twenty day fever (typhoid) and of the fourteen-day fever (typhus), according as the disorder ‘takes the turn’ in three weeks or in a fortnight. In like manner the relapsing fever was called in Ireland the five-day fever, although as it has its crisis *most often* on the seventh day, it might be termed more properly the seven-day fever. We should then have the *natural duration* of the three fevers marked by *periods of weeks*.”

While we are disposed, as no doubt others will be, to yield full credence to the views thus so plainly expressed by Dr. Watson, it must at the same time be admitted that few other authors, if any, define so positively the natural limit of these three fevers as being bounded by seven-day periods. In referring to most authorities, the statements given are so indefinite as to the dura-

tion of these fevers that it is difficult to arrive at any conclusion. Authorities also greatly differ on this point. It would seem, however, that these discrepancies are to be accounted for by the fact that in the calculations upon which the statements given are warranted, all kinds of cases have been embraced, both natural and unnatural ones; those that *were* and those that *were not* associated with visceral inflammation; those that occurred in organisms already depraved; those in which relapses occurred, or that were interfered with in their natural course by injudicious medication or improper food, etc., etc.

Another source of error and of difference in opinion has been a want of uniformity in the method of calculation adopted: thus, by one author, the commencement of the disease is dated from the day the patient "went to bed;" another counts from the day he "entered the hospital;" while a third perhaps reckons from the time at which the case was "first seen by a physician." In like manner the *end* of the complaint has been regarded by some to be when the patient "got up and walked;" by others when he "took food," or when he left the hospital," etc. It is no wonder, therefore, that the stated duration of these fevers, as given by authors, is dissimilar; but at the same time this want of agreement does not disprove that the *natural* limit of these affections, in *natural* cases that run their *natural* course, is bounded by septenary periods. Perhaps further observations, conducted on a more exclusive method of calculation, will be necessary before the normal septenary limit of continued fevers can be positively demonstrated. There is, however, on record, sufficient evidence [as any one may see by examining the authorities for himself] to warrant the statement, that the influence of weekly periods in modifying the phase of continued fever, has been generally recognized.

Referring the reader, therefore, to the text books on Practice and to the monographs of Bartlett, Fordyce, Gregory, Chapman and others, on Fever, we leave this part of the subject and proceed to discuss the exanthemata, in which, as far as we are aware, the existence of septenary periodicity has not hitherto been recognized by the authorities.

In considering this class of fevers it is designed to show that the natural duration of measles, scarlatina and erysipelas, in

typical cases—which embrace the majority—is seven days; while small-pox, counting from the beginning of "primary" fever until the stage of scabbing, includes a duration of exactly fourteen days.

In order to present in as condensed manner as possible the phenomena of each of these diseases, as they occur on successive days, the symptoms have been arranged in a tabular form. In the first column the name of the author is given, and then follows a series of columns, each of which presents the symptoms, as described by the authority quoted, in the order of their daily occurrence.

Tables I, II and III, present respectively the symptoms of measles, scarlatina and erysipelas, in accordance with this plan. As regards small-pox (Table IV) it was found impracticable to carry out the same plan without devoting a separate table to each author. The symptoms of variola are therefore presented in the order of occurrence and decline, as generally given by nearly all writers on Practice. Reference has been had, however, particularly to one of the *latest* medical authors, viz: Aitken (*Practice of Medicine*), to whom the reader, if he wish to judge of the faithfulness of the sketch presented in the table, is referred.

It may here be proper to state that measles, scarlatina, small-pox and erysipelas, have been considered, to the exclusion of chicken-pock, swine-pox, roseola, rubeola-sine-catarrho and a number of others, because these latter are regarded for the most part as pseudo-modifications of the former. We should no more expect to find a well-marked septenary periodicity in these hybrid diseases, than we should to observe it limiting the term of gestation in animals, where breeds have been mixed, or in which, from other causes, nature has been made to deviate from its normal course.

Furthermore, it should first be agreed upon, before the tables are examined, that such expressions as "six, seven or eight days" or from "six to eight," ought really to be considered as simply meaning seven; for in calculating the duration of any case, the method has been generally adopted by authors of dating the commencement of the disease from a particular "*day of the month*," such as the 1st of January for example. But as it is never specified

whether the symptoms began at 1 A. M. of that day or at 11 P. M., there is necessarily an undetermined difference of twenty-three or twenty-four hours overlooked in the calculation. To be exact, seven days should be considered as seven times twenty-four or 168 hours ; but this period may begin at noon of January the 1st and end at noon of January the 8th, when it would appear, if both these days are included, that eight days had been absorbed by the disease, when in reality the time occupied has been only seven times twenty-four, or 168 hours or seven days. Reversing the order of things, twenty-four hours might be lost instead of gained in the calculation, so as to make the real period of seven days appear as if it were only six. Hence we say the expressions "six to eight," or "thirteen to fifteen," may be justly taken respectively as seven and fourteen. Where there is no certainty in any instance, is it not legitimate to adopt the legal practice of according to the defence the benefit of a doubt ?

Referring now to the tables it will be seen in the case of measles [Table I] that all the authors quoted appropriate the first three days to fever and catarrhal symptoms ; on the fourth day the eruption appears. After this the disease pursues its usual course until the seventh day, or thereabouts, when it will be seen all the symptoms begin to decline.

In the case of scarlatina (Table II) the regular day for the appearance of the eruption is the second, while the decline appears to begin somewhat earlier than in measles ; though several of the authors quoted include a full seven days before the complaint reaches its termination.

In the third table, the septenary limit of erysipelas appears sufficiently evident.

Small-pox, as shown by Table IV, occupies a double septenary period of fourteen days. The first seven days are occupied with primary fever, and the full development of the eruption in its vesicular stage. Then begins a second septenary period, on the second day of which (that is, the ninth day from the commencement of the disease) owing to suppuration of the vesicles, secondary fever is developed. By the fourteenth day the secondary fever has gone, and the whole crop of pustules have been converted into dessicated scabs.

Table I. MEASLES.

AUTHOR.	Symptoms during first 3 days.	Fourth Day.	Fifth Day.	Sixth Day.	Seventh Day.	Eighth Day.	Ninth Day.
WOOD.	Fever and catarrh. "Eruption begins to appear."	Eruption appears on the lower limbs.	Eruption at its height.	Eruption at its height.	Rash, fever and catarrh decline.	Rash, fever and catarrh decline.	Desquamation.
WATSON.	Fever and catarrh. Regular period for Eruption. Coming out appearance of the on trunk.	Eruption coming out on the lower extremities.	Eruption declines in the same order as it appeared.	.....	.....	.....	.....
DA COSTA.	Fever and catarrh. Rash on face and neck.	Rash extending over body.	Rash over body.	Rash begins to fade and fever lessens.	"By the ninth day both fever and rash have left."	.....	.....
TANNER.	Fever and catarrh. Eruption comes out.	.....	.....	Eruption begins to fade.	"Desquamation and itching."	.....	.....
WILSON.	Fever and catarrh. Nausea and sickness subsides.	Efflorescence appears on the face.	Efflorescence appears on trunk and lower extremities; body, and is at its height on the face.	Effl. appears on the trunk and lower extremities; and limbs declines. Coryza, now <i>gradually</i> disappears. On back of hands, hoarse, hoarse voice.	Rash on trunk and limbs declines. Coryza, now <i>gradually</i> disappears. On back of hands, hoarse, hoarse voice.	.....	.....
FLINT.	Fever and catarrh. Eruption appears.	Eruption developed.	Eruption further developed.	Eruption begins to fade on the face and successively on the trunk and extremities.	.....	.....	.....
AITKEN.	Fever and catarrh. Eruption generally appears on face, neck and arms.	Eruption appears over the trunk.	Maximum of fever continuous.	Eruption begins to decline on face, neck and trunk.	Eruption fades from face, neck and trunk.	Temperature continues to decrease.	Temperature normal.
CONDIE.	Fever and catarrh. Eruption makes its appearance on the face; also spreads on face and neck to trunk and limbs, on the body.	Eruption begins to fade at its height.	Eruption on body subsides.	Eruption fades on back of hands.	Slight discoloration only remains.	.....	.....

Table 2. SCARLATINA.

AUTHOR.	First Day.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.
WOOD.	Invasive fever, etc. Eruption appears. Fever.		Eruption further developed. Fever.	Fever continues.	.....	.....	.....	.....	Disease ends in desquamation. The disease attains its height from 5th to 9th day (medium 7th), when all the symptoms begin to decline."
WATSON.	Invasive fever, etc. Eruption appears.		Eruption stands out.	Eruption stands out.	.....	Eruption begins to decline.	Eruption disappears by end of 7th day.	Desquamation begins.	Desquamation.
DA COSTA.	Invasion.	Eruption appears.	.....	.....	.....	Eruption declines.	Eruption declines.	.....	Cuticle begins to come away.
TANNER.	Invasion.	Efforescence appears.	.....	.....	.....	Efforescence declines about fifth day,	.....	.....	.....
WILSON.	Fever, etc.	Efforescence on face, neck body, arms and b, eaest.	Rash extends to mucous membranes.	Rash on lower extremities, vivid redness.	Efforescence attains its most	"The decline of Efflor. further Desquamation. commences on the 5th day from the eruption."			
FLINT.	Invasion.	Eruption unusually appears.	Eruption all over the body.	"Duration of stage of eruption, in the majority of cases, four to six days."	"Duration of stage of eruption, in the majority of cases, four to six days."		Desquamation.		
AIKENS.	Invasion.	Eruption appears on face, neck and arms.	Eruption a p. on lower limbs.	Eruption fades."From the 6th to 8th day the trunk, on lower limbs, from the neck, erupts fades on lower limbs."	Eruption appears on lower limbs.	Eruption fades."The disease maintains its height, and the fever maintains its course, usually from the 5th to the 9th day (medium being 7th), when continuous defervescence sets in, and all the symptoms begin to decline."			
CONDIE.	Febrile excitement.	Febrile excitement.	Febrile excitement on face and height.	Eruption at its height.	Begins to de- Eruption very indistinct, gone by end of 7th day.	Eruption by inter- siccatives. Fever.	Eruption entirely subsides.	Desquamation.	Desquamation.

Table 3. ERYPSIPelas.

AUTHOR.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.
WOOD.	Languor, chills, Fever well marked. Fever continues. headache and some Erup. may appear towards evening. fever.			Fever continues. Cuticle elevated by vesicles. usually appears. a serous liquid (vesicles).	Fever as before. Vesicles begin to burst and dry.	Fever lessens. Vesicles burst and begin to dry.	Fever gone. Vesicles form crusts or scabs.
WATSON.	Rigors followed by Fever continues. fever, etc.				"The redness fades after lasting three or four days."		
DA COSTA.	Chill and fever.		*****		.....	"By the 7th or 8th day the disease is over."	
TANNER.	Rigor, etc.		*****			"After three or four days the redness fades, the swelling subsides, and the cuticle desquamates."	
WILSON.	Rigor and fever.			Fever increases. Local affection usually appears.	Fever as before. Redness more vivid; without change.	Symptoms continue without change.	Redness and fever subside. Resolution begins to decline to-day.
AITKEN.	Chills, fever, etc.			Fever continues. Erup. may appear.	Fever greater. sensations of pain more acute.		
						"The epoch for the commencement of defervescence vacillates between the fourth and eighth day." "Normal heat then regained in from 12 to 36 hours.	

Table 4. SMALLPOX. (FIRST SEVEN DAYS.)

1st and 2d Day.	Third.	Fourth.	Fifth.	Sixth.	Seventh.
Rigors. Fever Sickness Lum- bar pain, etc.	Primary fever continues. Eruption begins to appear Eruption <i>pustular</i> neck, etc., and on face, neck, now appears on arms and wrists trunk also.	Last day of pri- mary fever. Eruption still papular on face, etc.; <i>pustular</i> on trunk, and now appears on lower extremities.	Primary fever subsists. Eruption <i>vesicular</i> on face, neck, etc.; <i>pustular</i> on trunk, and now appears on lower extremities.	No primary fe- ver. Eruption <i>vesicular</i> on face, neck, etc., and on trunk; still <i>pustular</i> on low- er extremities.	Fever gone. Eruption on all parts <i>vesicu-</i> <i>lar</i> .

SECOND SEVEN DAYS.

Eighth	Ninth.	Tenth	Eleventh	Twelfth.	Thirteenth.	Fourteenth
The disease (both fever and eruption) re- main nearly as on 7th day. Perhaps a few vesicles on the face "begin to turn" (particu- larly in cases where the papu- lar stage of the eruption lasted only 24 instead of 48 hours), with slight in- dications of fe- ver in evening.	Regular day for secondary develop- ment of fever in full secondary fever. Eruption on face <i>pustular</i> , ind neck <i>pustular</i> , face, neck, <i>vesicular</i> on etc., and al- l over trunk and low- er extremities.	Secondary fever reaches its acme on all parts <i>pustu-</i> lar. A few vesicles on face in a very minature burst and scab.	Secondary fever rapidly declining. Eruption on face, neck, <i>vesicular</i> on lower extremi- ties.	But slight fever (if any) sec- ondary fe- ver. Eruption on face, neck, <i>vesicular</i> , etc., and scabbing; it is discharged, scabbed. & begun to heal. Eruption on trunk still <i>pustu-</i> lar and lower <i>lar-</i> <i>pustular</i> .	Secondary fever gone. Eruption on all parts <i>scab-</i> <i>bed</i> . Scabs fall- ing from face and neck.	

We may next refer to the PERIOD OF INCUBATION of the several exanthematous fevers—the period that elapses from the day of infection until the development of febrile symptoms. In the next table, therefore, the incubative periods of measles, scarlatina, small pox and erysipelas are given according to the authors whose names appear in the first column.

Table 5. INCUBATIVE PERIODS OF THE EXANTHEMATA.

AUTHOR.	MEASLES.	SCARLATINA.	SMALLPOX.	ERYSIPelas
WOOD.	Generally about a week; sometimes shorter; sometimes two or three weeks. Dr. Panum's cases on Feroe Islands almost always 13 or 14 days.	From 2 or 3 days to generally about 5 days.	Generally 9 to 12 days. "Asserted to be 5 days, and 2 or 3 weeks."	.....
WATSON.	10 to 14 days. Dr. Panum's cases, as quoted by Watson, some 10 days, some 14.	Not given.	Not given.	Two cases given, incubation "just 7 days."
DA COSTA.	Variable: 7 to 14 days.	Very uncertain. Only 1 day, or some weeks.	6 to 20 days: generally about 10.	.....
TANNER.	10 to 15 days.	4 to 6 days.	12 days.	3 to 14 days.
AITKEN.	13 or 14 days.	From a few hours to 10 days.	Inoculated 7, 8 or 9 days. Natural 10 to 16 days. Extremes, 5 to 23 days.	Probably from 2 to 14 days.
WILSON.	7 to 14 days.	2 to 10 days.	5 or 6 to 20 days; some longer. When inoculated 9 days.	.....
FLINT.	1 to 30 days; majority from 6 to 10 days. Dr. John E. than 6 days. McGirr's inoculated cases 4 to 9 days.	A few hours. Rarely, if ever, more than 6 days.	1 to 3 weeks. Average from 12 to 14 days.	.....

The foregoing table, compiled faithfully from recognized medical authorities, would seem to establish the fact (if it establishes anything) that the *exact* period of latency, in the affections mentioned, is in reality unknown. It by no means proves—but neither does it disprove—that the duration of incubation is seven days or its multiple. Unfortunately the statements given have been made to present the extremes of short and long incubation, and the average between those extremes, without making known the precise day after infection on which the *greatest number* of cases commenced. If the number of instances observed to begin on each day after *infection* (not after *exposure*) had been accurately ascertained, it is more than probable that the seventh day would be the one on which the largest number of cases could date their development.

But the nature of the specific poison is so subtle, so little known, and we are so little acquainted with the conditions of body favorable to its reception, that to ascertain the precise

period of infection is by no means an easy undertaking. The fact of a person having been exposed to contagion at a particular date, does not prove that he was infected at the same time. Even though the individual should have been exposed but once, and subsequently get the disease, this does not prove that infection took place *simultaneously* with that one exposure; for the patient may have carried the poison away with him on the clothing or by other means, and so have remained in contact with it for a longer or shorter time before it gained admittance into the system. Moreover, for aught that is known to the contrary, the capacity of the poison itself to infect, and also its period of latency after infection, may be altered by changes of climate, soil or temperature; by being transplanted from sea to land, or *vice versa*; or by variations in the humidity of the atmosphere, etc., etc.

Under such circumstances, therefore, if the period of incubation be at all a fixed one (and we believe it is) some more accurate method of defining the exact date of infection must be adopted, than that of simply noting the time of exposure to contagion. Such a method is furnished by inoculation. After the poison is admitted directly into the blood by puncture, and we know the exact hour at which this is done, the beginning of incubation and its end may be more accurately determined.

If, therefore, the duration of incubation is at all measured by septenary periods, we should expect to find this peculiarity exhibited after inoculation. Yet, admitting the law of sevens in this particular, there might still be anticipated deviations from the rule, owing to individual peculiarities of constitution, or to temporary new conditions of the body, or of the poison itself, at the time of operating.

Now, by reference to the authorities, it will be seen evidence is not wanting to indicate, at least the probability, that the period of incubation after inoculation is really seven days. Thus Dr. Gregory remarks: "It is a remarkable fact that when the poison of small-pox is received into the system by inoculation, *seven days only* elapse between the insertion of the virus and the establishment of the fever." Professor Chapman, in referring to inoculated and natural small-pox, observes as follows: "Be it again remarked, as deserving of attention, that there is a natural differ-

ence in this respect (meaning the period of incubation) in the two forms of disease. The system becomes affected in the inoculated small-pox *on the seventh day*—in natural small pox *on the fourteenth.*" Dr. Tanner states: "It is curious that when the disease (small-pox) is received into the system by inoculation, *seven days* elapse between the reception of the virus and the appearance of the fever." By referring to the foregoing table, however, it will be seen Aitken gives the duration of incubation in small-pox after inoculation as six, seven or eight days, and Wilson as simply *nine*.

Whether the evidence thus presented is sufficient to justify us in regarding seven days as the *usual* period of incubation after inoculation, and six, eight and nine as more *unusual* deviations from that regular period, every one must judge for himself. The subject is perhaps not a clear one, nor can it be until further experiments have been instituted.

But with regard to measles, also the same probability appears that the disease manifests itself *seven days after inserting the rubeolous poison.*

Dr. Gregory, in referring to this subject, remarks: "The latest recorded experiments in inoculating measles are those made in Hungary, by Dr. Katona. Out of 1112 experiments the inoculation was successful in all except 78 (*i. e.*, in 1034 cases.) *On the seventh day* rigors occurred with the usual catarrhal symptoms. On the 9th or 10th the eruption manifested itself, and *declined on the 14th.*" Thus the inoculations proved, in 1034 cases, not only that the period of incubation was seven days, but also that the duration of the disease was seven days more. As in variola, however, other experiments seem to indicate that in certain cases, or owing to particular circumstances, the seven-day period may be lengthened or abridged. Thus Dr. Wood tells us that in the inoculations performed by Home the disease made its appearance "*upon the sixth day;*" but whether it was the sixth day *inclusive* or *exclusive* of that on which the operation was performed is not stated. In Rees' Cyclopaedia, where Home's experiments are referred to under the head of "inoculation," it is stated that "*the eruptive fever generally began six days after inoculation.*" Dr. Flint, in his "Practice of Medicine," refers to cases inoculated by Dr. John E. McGirr, where the incubation lasted "*from four to*

nine days." But the number of cases is not given, nor is it stated in how many the incubation was four days, in how many seven, nor in how many nine. Seven days may have been the more usual period, and the other numbers between four and nine exceptions to the rule. At any rate, the results of the experiments of both Home and McGirr together are hardly sufficient to counterbalance the 1034 cases of Katona.

With regard to scarlatina, we have not been able to meet with any recorded experiments giving the period of incubation after inoculation, except one. Dr. Aitken refers to "a case inoculated by Rostan, in which the incubation was *seven days*."

In that variety of erysipelas usually classed with exanthematic fevers, and which runs such a regular and definite course as to merit the classification, we are not aware that any experiments of inoculation have been performed. The authorities quoted in the table (No. V) do not seem to indicate seven days as the usual period of incubation, except in the two instances mentioned by Dr. Watson. We may state, however, that in an epidemic which prevailed at Petersburg, Va., in the winter of 1844-5, Dr. Peebles tells us (see Amer. Jour. Med. Sci., Philad. for Jan. 1846), that "in fourteen cases the period of incubation was *in every case seven days*."

We might here further remark, in regard to plague, that its incubative period appears to be seven days. Thus says Dr. Gregory :

"The term of forty days quarantine, originally judged necessary for the security of the community against the contagion of plague, is founded on the utter ignorance of the laws of morbid poisons. As the incubative stage of plague *never exceeds seven days*, so one week of quarantine is in strictness sufficient."

He adds, in a note, that "the commission of the French Academy of Medicine say, that at a distance from countries where it is endemic, and beyond or away from epidemic foci, the plague has never broke out in persons who have been exposed to its influence *after an isolation of eight days*."

To recapitulate the facts which it has now been attempted to establish, by reference to impartial authorities, and which led us to believe in the existence of septenary periodicity, we find them to be the following:

1. Menstruation occurs every 28 days, or on a day that is some other multiple of seven.
2. The normal period of gestation in woman lasts 280 days, (40 times 7).
3. Out of 13 cases of twin superfetation, the interval between the births was a multiple of seven days in all, save three.
4. Where the period of gestation in animals has been accurately ascertained, its duration is a multiple of seven days.
5. The duration of incubation in birds, and in the bee and moth, is a multiple of seven days.
6. In intermittent fever, relapses occur after an interval of seven days or its multiple; and the duration of the disease, when suffered to terminate spontaneously, is limited by a multiple of seven paroxysms.

8. The duration of typhoid fever is 21 days.

"	"	typhus	"	14 days.
"	"	scarlet	"	7 days.
"	"	measles	"	7 days.
"	"	erysipelas	is	7 days.
"	"	small-pox	is	14 days.

9. The period of incubation in inoculated small-pox, measles, and scarlatina is seven days.

10. The period of latency in epidemic erysipelas and in plague also appears to be seven days.

Intending to offer some suggestions, in a future paper, as to the probable nature and origin of septenary periodicity, we here leave the subject for the present, only remarking, in conclusion, that the seven days incubation of inoculated small-pox, measles, and scarlatina, is strikingly analogous with the development of life in bird, bee, and moth's eggs, after an incubation of seven days or its multiple. The analogy inclines to lend some support to the doctrine of "animate contagion." Can it be that the infecting matter of contagious diseases contains latent but living germs, or eggs, which, though dormant when introduced, are afterwards hatched into a more active state of existence, by the warmth applied to them, during a seven-days incubation in the blood?

ART. II.—*Remarks on Malarial Hæmaturia.* By S. F. STARLEY,
M. D., of Fairfield, Texas.

IN the August number of the Galveston Medical Journal, for 1867, I published an account of a new form of malarial disease, under the head of “ Recurrent Hæmaturia Miasmatica.”

Up to that time I had not seen any mention made of it, in the journals, as a distinct form of malarial fever, and was not aware that it was becoming so wide spread throughout the South.

It first made its appearance here, as stated, in the paper above alluded to, in the fall of 1866, since which time, it has prevailed more or less every summer and autumn, until it has become a distinct and common disease of the country. After reading the various and conflicting views of different writers, regarding the pathology of this disease, I cannot see that it is much better understood now than when I first described it.

I quote the following paragraph from the article above mentioned: “ Having had no opportunity of making post-mortem examinations, I have no knowledge of its anatomical peculiarities. But from its most prominent symptoms and its evident dependence upon malarial causes, I regard it as a congestive form of intermittent fever, the stress of which is thrown upon the kidneys. But what it is that causes the determination to these organs I cannot tell. Certain it is that they are excited to greatly increased functional activity, for coincidently with the hæmorrhage the quantity of urine secreted is largely above what I have ever known in any other condition of the system, unless it is when the kidneys take upon themselves the task of removing some large dropsical effusion.”

That the disease differs somewhat in its manifestations in different localities, is apparent from the descriptions given of it by different writers. One condition, however, seems to be essential to its development everywhere—viz: blood deterioration, from exposure to malarial influences. This is admitted by all, and is at once the key to its etiology, and the guide to a rational treatment. Nearly all the patients attacked with this disease are persons who have long suffered from the malarial cachexia, or who are having regular paroxysms of intermittent fever. In such persons the nerve force is lowered, nutrition is impaired and the

walls of the blood vessels are necessarily weakened. Hence the inability of the vessels of the Malpighian bodies to resist pressure, and under the distention caused by congestive determination to the renal organs they give way and haemorrhage follows.

It is to be regretted that there is so much confusion among writers in regard to this fearful form of disease, for, while all agree that it is caused by exposure to malarial poison, each gives it a name, in accordance with his fancy, or his peculiar views of its pathology. In the matter of treatment (which is by far the most important part of the subject) they differ so widely that the young practitioner is in danger of having his mind confused, instead of enlightened by the conflicting statements. One considers mercury as useless, and injurious, while another considers it as a "*sine qua non.*" One eschews quinine altogether; another warns us against the dangers of giving it in large doses; while another places his main reliance upon bringing his patient as rapidly as possible under the influence of the anti-periodic. Most regard opium as highly dangerous, while some think it fulfills important indications in certain cases.

I can only account for these discrepancies on the supposition that differences in the manifestations, and complications of this disease, as it occurs in different localities, require different measures of treatment to suit individual cases. There is one thing, however, at which I cannot but express surprise, and that is that quinine should be excluded from the treatment of *any disease of acknowledged malarial origin.*

I have long thought that if nature has been provident enough to furnish an antidote to the malarial poison, she has certainly stored it in the bark of the cinchona tree.

In giving the plan of treatment, which experience has taught me to be most successful in this disease, I do not presume to offer it in a didactic style for the guidance of others; but I do claim that it is peculiarly adapted to the management of the disease as it occurs in this section of country.

1st. When called to a person attacked with this disease, if it be in the person of an adult, I give from four to five grains of quinine, by means of the hypodermic syringe, generally choosing a point near the insertion of the deltoid for the injection, though

any other point where the skin can be raised easily, and where there are no large sub-cutaneous veins will answer as well. I prefer this method of administering the quinine partly because of its greater certainty of action—its quicker diffusion through the system—but more especially because there is no danger of the dose being lost, owing to the almost constant nausea and vomiting that attends the disease. It is my object to bring the patient at once under the influence of quinine, and to maintain this influence until the disease is broken up. I give it hypodermically every five or six hours, in such doses as I think will secure its uninterrupted influence upon the system; and this I do regardless of the degree of fever that may be present, believing that the malarial poison must be neutralized in the system before we can bring safety to our patient. To overcome the nausea and bilious vomiting, which is nearly always present, and is a most distressing symptom, I give small and repeated doses of calomel, say half a grain every half hour, or one grain every hour; and occasionally a little comp. spts. lavender, or soda water in a state of effervescence.

After the stomach has been quieted by the calomel (which it seldom fails to be) and some eight or ten grains have been taken, I commence giving teaspoonful doses of a saturated solution of epsom salts, flavored with a little comp. spts. lavender, or ess. lemon. This I give every hour or two until the bowels are acted upon, when generally it will be found that the so-called bilious stools will pass off freely, and this rarely fails to mark a decisive improvement in the patient's condition. When there is cephalgia, lumbar pains, and aching in the limbs—all of which are often present—I do not hesitate to give small doses of morphine until relief is obtained, believing that the opiate, if not carried to the extent of producing nervous depression, can do no harm, but is productive of immense good by quieting the system and procuring rest. Moreover, the excessive nausea and vomiting is sometimes arrested by small doses of morphine when all other remedies have failed.

For these reasons I am not prepared to agree with those who utter an unqualified condemnation of opium in this disease, though I believe its safe employment requires great care and

judgment on the part of the physician. The liver in these cases is always engorged, and slow to act, and it is often useful to apply a blister over this organ to assist in relieving it of its turgescence, and to excite it to functional activity.

The blood in all these cases is profoundly altered in its constituency and lowered as a vital fluid ; hence the propriety and necessity of administering the mineral acids and iron tonics as blood restorers. These I usually commence with, as soon as the calomel has done its work, and passed out of the system, and the fever has somewhat abated. If commenced with earlier they are apt to be rejected by the stomach, and thus prove annoying to the patient. The preparation of iron, which I prefer to all others in this disease is that known as the liquid oxysulphate, the formula of which is given by Dr. J. R. Black, in the number of the Cincinnati Laneet and Observer for March, 1868.

Of this preparation I give from six to ten drops at intervals of five to six hours. It is best given in a little sweetened water flavored with lemon. It certainly possesses remarkable efficacy in this disease, and seems to restore the blood to its normal condition more rapidly than any other remedy with which I am acquainted.

I have said nothing of haemostatics in the treatment of this disease : as a general thing they are not needed, the haemorrhage ceasing as soon as the morbid process is interfered with by the anti-periodic. But there are cases—and I have seen numbers of them—in which the bleeding is so profuse as to exhaust the patient rapidly, and unless it can be checked a degree of anaemia is soon induced from which the patient cannot recover. In such cases we are to use a strong decoction of uva ursi, the astringent preparations of iron, and the gallic acid. The latter I have found more reliable in such emergencies than any other remedy. I give it in doses of three to five grains every hour or two, until the haemorrhage is checked.

In no disease is it of greater importance to watch for an opportunity to administer suitable nourishment to the patient. The blood is impoverished and must be renewed or the patient dies.

ART. III.—*The Microscopical Anatomy of the Human Liver:* By
Dr. H. D. SCHMIDT, of New Orleans.

PREFATORY REMARKS.

THE following pages, treating of the microscopical anatomy of the human liver, embody the results of my labors in the investigation of that organ during the year 1859. These I had arranged in the form of a treatise during the fall of that year, and had accompanied it by numerous drawings, carefully executed by myself from various minute dissections and preparations. These represented almost every minute part of the organ. The delay in presenting the important results of these investigations to the medical public, demands an explanation which I briefly give, as follows:

In the January Number of the American Journal of Medical Sciences of 1859, I published the results of certain researches made by me during the previous year, concerning the minute structure of the hepatic lobules, which had led me to the discovery of the true commencement of the smallest branches of the hepatic ducts. Of these, the labors above referred to, were only a continuation, for, after the discovery just mentioned, my attention had been directed to the exploration of the whole organ; my efforts were again rewarded by certain unexpected discoveries. Accompanied by an article on the "Making of Minute Injections" with a description of my apparatus for that purpose, the treatise was presented in 1860 to the Smithsonian Institute in Washington, and accepted for publication. The engraving of the illustrations, however, and the great expense connected with it, prevented its publication during that year, and, accordingly, it was postponed to the commencement of the following. Unfortunately, the civil war commenced, causing another postponement and, eventually, the manuscript and drawings were destroyed by that much to be lamented fire, consuming a portion of the Institute. These bad tidings reached me in the fall of 1865, a few months after my return from the Confederate army to New Orleans. The loss of the drawings was irreparable to me, for I had neither time nor opportunity again to reproduce them as they were, since it would have required all the dissections to be

made over. Fortunately, I found the original manuscript preserved among my papers, and desiring to present to the profession the results of my labors as soon as possible, I set to work again in the spring of 1866; unfortunately, the poor condition of my health interfered this time and caused another postponement. When, in the ensuing year, I was able to resume my private practice, it, of course demanded the greater part of my time. I could, therefore, but slowly advance with my scientific labors, and thus matters stood, when the epidemic of yellow fever made its appearance here two years ago. Again I found myself obliged to put my labors on the liver aside. After this, other employment compelled me to postpone to the present time the publication of discoveries I made ten years ago.

The following treatise on the "Microscopical Anatomy of the Human Liver," and the "making of minute injections," is a true copy of the same original as the manuscript burned. The present drawings, of course, are less numerous and much more simple, in order to reduce the expense and thus secure the publication of the work. Preceding the treatise will be found an extract from the printed "Report of 1860 of the Smithsonian Institute to the U. S. Congress," with which Prof. Jos. Henry, its Secretary, has kindly furnished me, so that I might prove the priority of my observations and discoveries. There will also be found an extract from the "Proceedings of the Academy of Natural Sciences of Philadelphia."

When more than ten years ago, at Philadelphia, I first announced the true manner in which the smallest branches of the hepatic duct take their origin, the fact was so novel that even some of my best friends, notwithstanding they knew me as a truthful observer, and that I showed them my injections, looked upon my statements with suspicion and doubt. It was not my veracity they doubted, but the truth of the facts, for they supposed the rupture of a small duct and of some of the capillaries of the blood to have taken place, by which accident the coloring material passed from the former into the latter. Though I was conscious of the improbability of such an occurrence, I could do nothing but defend my statements and patiently await the time

when the observations of others would corroborate what I stated. From the Autumn of 1860, to July, 1865, I heard nothing of the observations and discoveries made abroad during that time; I was, therefore, much pleased, when by looking again over foreign journals—especially the German—I found that one investigation into the minute anatomy of the liver had followed the other, the main results of which had been the corroboration of the facts which I first brought to light in 1858;—and these were followed by others which still more confirmed the truth of my assertions.

It seems to be now very generally admitted, that the finer branches of the hepatic duct arise from a network of capillary canals, existing throughout the parenchyma of the organ. The question which remains to some extent still open is: whether the walls of these canals are formed by the adjacent cells, or whether they consist of a separate basement-membrane like those of all other capillary vessels. We accordingly find that at present the special investigators of the liver are divided into two parties, of which the one looks upon the network of biliary canals as mere intercellular spaces in which the finest hepatic ducts arise, while the other, like myself, regards this biliary network as consisting of true capillary vessels. The anatomists who have endorsed the latter view in consequence of the results of their researches are *Budge*,* *Andrejevie*,† *Mac-Gillavry*,‡ *Hyrtl*,|| *Fokker*,§ *Irminger*,** *Frey*,†† *Chrzonsewsky*†† and *Eberth*.||| Nevertheless

* *Budge*.—Ueber den Verlauf der Gallengange, "Archiv. f. Anatomie u. Physiologie." Jahrgang, 1859, p. 462. Quoted in "Canstatt's Jahresbericht" for the year 1860, vol. 1, p. 73.

† *Andrejevie*.—Ueber den feineren Bau de Leber—"Wiener Sitzungsberichte," vol. 43, 2, p. 379. Quoted in "Canstatt's Jahresbericht" for the year 1862, p. 89.

‡ *MacGillavry*.—Zur Anatomie der Leber—"Wiener Sitzungsberichte," 1864, No. 12, p. 79. Quoted in "Canstatt's Jahresbericht" for the year 1864, vol. I, p. 98.

|| *Hyrtl*.—Ueber das Verhalten der Leberarterie zur Pfortader bei Amphibien u. Fischen, "Wiener Sitzungsberichte," vol. 49, p. 167. Quoted in "Canstatt's Jahresbericht" for the year 1865, vol. 1, p. 71.

§ *Fokker*.—Nederl.-Tydschr. v. Genezek, 1864, vol. 8, p. 532. Quoted by Dr. N. Chrzonsewsky—"Virchow's Archiv," vol. 35, p. 156.

** *Irminger*.—Beitraege zur Kenntniß der Gallenwege in der Leber des Säugethiere. Inauguraldiss, Zuerich, 1865. Quoted in Canstatt's Jahresbericht for the year 1865, vol. 1, p. 71.

†† *Frey*.—"Canstatt's Jahresbericht" for the year 1865, vol. 1, p. 71.

†† *Chrzonsewsky*.—"Virchow's Archiv.," vol. 45, p. 153, 1866.

||| *Eberth*.—"Virchow's Archiv.," vol. 39, p. 88, 1867.

there is still a third party left who hold fast to the old hypothesis, first suggested by *Kiernan*, according to which the hepatic cells lie in basement-membrane tubes of a large diameter. At their termination, these tubes decrease in diameter until small enough to be blended with the walls of the smallest hepatic ducts. This party, small as it is now, consists mainly of the older anatomists. How far these different views accord with the process of secretion within the liver I intend to discuss at some more convenient time.

It seems to me, upon a review of the subject, that many of the German anatomists look upon Budge as having been the first to assert the existence of a network of biliary capillaries in which the finest branches of the hepatic duct arise. To the extent of my knowledge, I believe that this is an error, and, to do justice to myself I am compelled to assert a claim for priority. My discovery was made in the spring of 1858, and appeared in the "American Journal of Medical Sciences" on the first day of January, 1859; Budge's statements which are published in the "Archiv. fuer Anatomie u. Physiologie" of the year 1859, p. 462, must also have first appeared during that year. But, judging from the number of the page, his article seems to have appeared during the course of the year, while mine appeared at its very beginning. That Budge read the results of my researches after the journal containing them reached Europe, and was guided by them, I am, indeed, very far from asserting, or even suspecting. It would not be the first time that two men, separated by a broad ocean, discovered the same thing nearly at the same time. Nevertheless, it appears that my statements were the first to be noticed and criticised in Germany; the first notice being early in 1860, by Prof. R. Virchow, in a review of my statements, written by him and published in his "Archiv," 8th vol, New Series, p. 374. He, too, seems to have been surprised at the singularity of origin of the finer hepatic ducts, and accordingly expressed, to a very reasonable extent, his doubts. I quote as follows: "The main results of his researches, (Schmidt) reduces to the following: "Two capillary networks, each independent of the other, exist in the lobule of the liver; the one commencing at the periphery of the lobule from the smallest branches of the portal vein and hepatic artery, and ending in the centre in those of the hepatic

vein, serves for the circulation of the blood; the other, commencing independently in the centre of the lobule, near the interlobular vein, and ending in the smallest branches of the hepatic ducts, is most probably destined for the transport of the secretion of the gland. The cells lie within the meshes of the two networks, but, as it appears, are held and adherent more to the network for the secretion." He then continues: "Here, then, real biliary capillaries—*tubuli biliarii*—of very small diameter would seem to exist, and, moreover can be injected." Still farther on he says: "Besides, every one who has made injections of the liver, knows how easily the lymphatics of the liver may be filled through the lymphatic duct, and how difficult it is to determine here the limits of the natural connections. To this may be added that such a system of ducts, consisting only of *tunicae propriae* (base-membrane) without any epithelium would stand in the history of human glands without an example."

The manner in which Virchow speaks of my statements certainly indicates that their substance was new to him, and, as he remarks, stood without an example. As he does not refer to the statements of Budge, I may presume that, at that time, he was still unacquainted with them. Furthermore, I find Budge's researches first mentioned in "Canstatt's Jahresbericht," published in 1861, while mine are *reported* and *criticised* in that journal by Dr. v. Hessling, the collaborator on histology, in the year 1860, the year preceding.

I am glad to see that the German anatomists have applied the true name "*biliary capillaries*"—"Gallencapillaren"—to that network of capillary vessels in which the finest branches of the hepatic duct arise. This term was first used by Virchow and, as I see, afterwards adopted by MacGillavry. May I be permitted to state, however, that though after their discovery I termed them "*biliary tubules*" instead of "*capillaries*," I also at the same time mentioned their true appellation. The following passage, quoted from my first paper, p. 23, will prove this: "These fine biliary vessels are in reality *biliary capillaries*; but, for the sake of contradistinction from the capillaries that carry blood, I shall call them *biliary tubules*, until my observations have been confirmed by others and a better name proposed."

The conclusions to which I came after my first researches were in the main correct. The only error which I committed was in the diameter of the vessels; these I stated considerably smaller than by subsequent researches I found them to be. This I discovered afterwards, but as the article containing the mistake was already in print it was too late to correct it. When I wrote the following treatise, however, I took care to explain and correct it satisfactorily.

In concluding these prefatory remarks, it rests for me only to express the hope that other investigators will once more devote their labors to the liver, in order to corroborate—as in the case of the “network of biliary capillaries”—the existence of that extensive communication between the lymphatics and the hepatic ducts of that organ, as will be found described in the following treatise.

EXTRACT FROM REPORT OF THE SMITHSONIAN INSTITUTE FOR 1860.

“Beside the papers described, a number of others have been accepted for publication, or are in preparation, at the expense of the Smithsonian fund. Among the former we may mention an elaborate memoir on the anatomy of the human liver, by Dr. Schmidt, of New Orleans, of which the following are the principal points: 1. The accumulation of additional evidence of the existence of a network of capillary vessels previously discovered by the author, and described by him as “biliary tubules,” from which start the smallest hepatic ducts. This network is independent of that in which the smallest branches of the portal vein, hepatic artery and vein arise.

“2. The discovery of minute lymphatics of the liver, and their origin in the network of biliary tubules, by which a communication between the hepatic ducts and lymphatics is established.

“3. The discovery of lymphatic vessels, *directly* joining small hepatic ducts, by which a *second* communication between these vessels is established.

“4. A minute description of a system of small follicular and racimose glands, the ducts of which form extensive plexuses throughout the liver, and their relationship to other constituents of the organ. These glands have been imperfectly described by some authors, but their true relations have never been known.

“5. The discovery of a communication of the lymphatics with the ducts of these glands. As many of the latter join the hepatic ducts, a *third* communication between the lymphatics and hepatic ducts is thus *indirectly* established.

“The memoir also contains several other points of minor importance, together with a minute description of the blood vessels, hepatic cells, etc., perhaps more definite than has heretofore been given. The discovery of a natural communication between the hepatic ducts and lymphatics of the liver, accord-

ing to the author, is of great importance, for it explains the phenomena of jaundice as they occur in certain diseases. It also explains why the large lymphatics on the surface of the liver are frequently found filled with bile after death. The appendix to the memoir contains a description of the best method of making minute injections, together with the apparatus used for the purpose."

The above is a true copy of an extract from the report of the Secretary of the Smithsonian Institute for 1860, printed on pages 30 and 31 of the Report published by order of Congress (thirty-sixth Congress, second session), Washington, 1861.

JOSEPH HENRY,
Secretary of the Smithsonian Institute.

EXTRACT FROM THE PROCEEDINGS OF THE BIOLOGICAL DEPARTMENT OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, 1859, p. 19.

"Dr. Schmidt, with reference to a communication made by him at a meeting held in September, exhibited two livers of sheep, in order to show the method pursued by him in making his injections. It is as follows:

"The liver is placed in a basin from which the air is exhausted. The apparatus is so arranged that, when desired, a communication can be established with the blood vessels. In making an injection, the pressure is exerted chiefly by the weight of the fluid, which is in a column about six inches in height. So soon as the injection is made in this way into the hepatic duct the fluid used issues from the lymphatics. The injections are also made in a second manner—the organ not being kept in a vacuum. In this the lymphatics and their glands are also injected, though the pressure of the air prevents the liquid from flowing from the opened mouths of the lymphatic vessels as it does when this pressure is removed.

"In both the preparations exhibited by Dr. Schmidt, one having been injected in a vacuum, the other in the way just described, the lymphatic vessels and also their glands were seen injected."

EXPLANATION OF THE ILLUSTRATIONS.

Fig. I. Represents the termination of the finest branches of the portal vein and hepatic artery in their capillary network, and the commencement of the finest branches of the hepatic duct in the network of "biliary tubules." On the left side the capillary network of the blood vessels alone is represented; on the right, its relationship to the network of biliary tubules, from which the finest branches of the hepatic duct arise, can be seen; *a*, intra-lobular branch of the portal vein; *b*, intra-lobular branch of the hepatic artery,—both these vessels are seen to terminate in the same capillary network; *c*, intra-lobular branch of the hepatic duct,—its finest ramuscules are seen to arise in the network of biliary tubules. The latter, in order to distinguish them from the capillaries which carry the blood, have been shaded very dark. *d*, transversely oblique section of an intra-lobular hepatic vein, showing the manner in which it receives its capillaries. *e*, capillaries for the blood; *f*, biliary tubules,

or capillaries for the bile. The above drawing is a composition taken from three to four different specimens of sections of human liver—magnified 175 diam.

Fig. II. Plexus of lymphatics in the capsule on the surface of the human liver: *a*, large lymphatic vessels, showing their characteristic sinuses, dilatations and valves; *b*, portions of the network of biliary tubules, in which the nest lymphatic vessels are seen to arise; they are embedded in a small portion of parenchyma which was left adhering to the capsule; magnified 62 diam.

Fig. III. Small portion from the capsule of the "portal vessels," showing the anastomoses of the small branches of the portal vein and hepatic artery; also the "hepatic glands" and the plexus formed by their ducts. *a*, branch of hepatic artery; *b*, branch of portal vein; *c*, plexus of hepatic glands; *d*, capillary network of the blood vessels surrounding a portion of the glands; magnified 62 diam.

Fig. IV. Diagrammatic drawing, illustrating the relationship of the capillary network of blood vessels and that of the biliary tubules to the hepatic cells. *a*, terminanl branch of portal vein; *b*, finest branches of the hepatic duct, arising in the network of biliary tubules; *c*, hepatic cells. The latter are seen to fill up the meshes of the network.

Fig. V. Lymphatics of the capsule on the surface of the liver of the sheep. There is a small portion of the parenchyma left in the preparation, holding a portion of the network of biliary tubules from which the lymphatics can be seen to arise. Magnified 62 diam.

Fig. VI. *a*—A hepatic cell, partially torn with the needles of the "microscopic dissector," in order to examine its contents; the latter are seen to be drawn out in the form of filaments; *b*, represents the same cell completely torn. Magnified 375 diam.

Fig. VII. A hepatic cell torn by a needle with a broken point. Magnified 375 diam.

INTRODUCTION.

Ever since the publication of Kiernan's valuable memoir on the anatomy of the liver, this organ has been an object both of interest and controversy in the science of anatomy. Previous to this, attempts had been made by Malpighi, Masgagni, Ferrein and others, to investigate the structure of the liver, but as the means of investigation were very limited at that period, the results were too indefinite to give satisfaction. Consequently the views then entertained on the subject were to a great extent based on hypothesis. Although, for the want of efficient optical instruments, Kiernan added little to the knowledge of the special organs of secretion of the liver, viz., the cells; yet, the greater part of his observations in regard to the arrangement of the

blood vessels and ducts were undoubtedly correct, and formed an important acquisition to the knowledge of the anatomy of the whole organ. One cannot but be struck with the accuracy with which this excellent observer has described the details of these parts twenty-seven years ago.* His labors not only yielded valuable information, but also stimulated the exertions of other investigators. A new era dawned for the anatomy of the liver, and from that period up to this, many eminent names are found among the investigators of that organ. Unfortunately, the discrepancy in their views and the difference in the results of their investigations have also been great. It would be as presumptuous as difficult to trace this discrepancy to its cause; yet, it seems, that not the least has been due to the inefficiency of the means of investigation, of which the optical instruments form a prominent part.

The main difficulty in the investigation of the organ was always encountered in ascertaining the exact manner in which the smallest branches of the hepatic duct arise; and it is chiefly on this point that different views are entertained. Kiernan's investigations, as already mentioned, were limited to the arrangement of the vessels and ducts, and appear to have been made exclusively by the aid of the simple microscope, for, although describing these components of the organ very minutely, he gave no special description of the hepatic cells. The only remarks he makes in relation to the secreting organs of the bile, are when speaking of the smaller branches of the hepatic duct. Here, he says, the interlobular ducts enter the lobules, in which they form plexuses, which he calls the lobular biliary or secreting biliary plexuses; the ducts composing them being the secreting organs of the bile. At another place he adds that the ducts composing these plexuses are exceedingly minute; but as they always contain bile, much greater difficulty is experienced in injecting them than in injecting the blood-vessels of the liver. Further on he says, that the ducts forming the plexuses, when examined with the microscope present very much the appearance of cells; and the last allusion he makes to the subject is in saying, that the coats of the lobular ducts, on which the blood-

* Philosophical Transactions of the Royal Society of London, 1833.

vessels ramify, constitute the proper secreting substance of the liver, as the coats of the cortical ducts of the kidney, and those of the tubuli seminiferi, constitute the secreting substance of their respective organs.

Judging from these remarks, Kiernan's ideas of the secreting substance of the liver must have been vague; they appear more based on hypothesis than on direct observation; for, while he describes those ducts composing the secreting biliary plexuses as exceedingly minute, he yet supposes them to contain cells, the average diameter of which is, as we know at present, 1-1000 of an inch, almost four times that of an ordinary capillary blood-vessel.

Nevertheless, Kiernan's conjectures or hints, in regard to the commencement of the smallest branches of the hepatic duct, were taken up and gave rise to one of the theories which has long been entertained by many, and still is by some eminent anatomists. According to it the hepatic cells are contained in a net-work of tubes of basement-membrane in which the smallest branches of the hepatic duct take their origin. This view has been held by E. H. Weber, Kruckenbergh, Theile, Baker, Retzius, Leidy, Beale and others. Judging from the analogy of function which exists between the liver of man and the higher animals and that of other glands, or comparing it with those organs in the *invertebrata* which are supposed to perform the hepatic functions, we might be induced to believe that its construction must be the same. And it was undoubtedly this similarity of function upon which the above mentioned theory was based. Reasoning in the same manner, I have likewise formerly held the above views; but, although provided with the best glasses and other accessory instruments, all my efforts to detect the tubes of basement membrane enclosing the cells, have hitherto been in vain. Therefore, plausible as this view seems to be, it cannot be demonstrated, and it thus loses its value.

Another theory, advanced by Koelliker is*: That the hepatic cells form a net-work of solid columns, impinging upon the open mouth of the finest branches of the hepatic duct; the bile he

* Koelliker's *Handbuch des Gewebelehre des Menschen*, 1852, p. 421.

supposes to be transmitted from cell to cell, until arrived at the ducts. As for the correctness of this theory, Koelliker makes no positive assertions, he merely offers it as hypothesis. If the attention of this otherwise close observer had been a little more directed to the making and examining of good minutely injected specimens, I am confident, he would have arrived at different conclusions. I cannot but express the same opinion of the investigations of Handfield Jones, whose views differ from Koelliker's in supposing the finest branches of the hepatic duct to commence by closed extremities into which the bile had to pass by endosmose.

Still another view is entertained by Henlé, Gerlach, Guillot and others. From their examinations of minutely injected specimens, they concluded that the finest branches of the duct arise from a network of minute intercellular canals or spaces. The bile secreted in the hepatic cells, they supposed to be poured into these canals to be carried off by the ducts.

To these views, differing from each other, may be added the conclusions which I drew from the results of my former researches on the "anatomy of the hepatic lobule," and which were published in the American Journal of the Medical Sciences, Jan., 1859. They bear resemblance to the view last mentioned, and according to them the finest branches of the hepatic duct have their origin in a net-work of capillary vessels, similar to that through which the blood circulates. Both net-works are independent of each other in their relations; their meshes are filled up by the hepatic cells, free nuclei and granules.

By continued researches I have found additional evidences, proving the correctness of these observations, and which I have since extended to the entire anatomy of the liver, particularly of the human.

There exists in the liver also a great number of simple follicular and racemose glands, the ducts of which form very extensive plexuses. They have been described to a certain extent by some authors, but opinions in regard to them have always been conflicting. The true relationship they sustain to the lymphatics and the larger excretory ducts, has, to the extent of my knowledge, never been properly understood, or even investigated. I shall minutely describe them and their relations.

I have made also some observations with regard to the communication between the hepatic ducts and lymphatics. Although considerably puzzled upon first noticing this communication, I am at present, after long continued and careful examinations, convinced of its existence, I am also perfectly aware that an assertion like this, which, upsetting as it does, existing theories relating to the lymphatic system, will be a subject of severe criticism from many sides; but in the section assigned to this part of the subject, I shall bring forward the details of observations, which will, I hope, corroborate the assertion.

It has often been noticed, that when a liquid is injected into the hepatic duct, it will return by the lymphatics. Without any further attempt to trace this phenomenon to its source by microscopical examination, the majority of the special investigators of the liver were content to attribute it to a rupture of the finest branches of the hepatic duct, causing an extravasation, by which some of the finer lymphatics were ruptured, and thus an opportunity offered to the liquid to pass from one set of vessels into the other. My own belief is, that extravasations do not occur as easily as is generally supposed, if the proper precautions are observed, for the walls of the capillaries are very elastic, a fact, which I have often observed by stretching them one-third of their length by means of the microscopic dissector.

To the best of my knowledge, Mr. Natalis Guillot is the only author who has had the boldness to assert the existence of a natural communication between the biliary ducts and the lymphatics. His assertion has been declared improbable. But, it appears that the arguments in favor of improbability of such a communication are less conclusive than those in support of the probability; even if nothing more were noticed than the constant occurrence of the return of a liquid from the lymphatics under all circumstances, when previously injected into the hepatic duct. In support of this, may I briefly refer to the remarks made by other observers on this subject. Kiernan says*: "The nerves and deep-seated absorbents ramify in the portal canals; I have not been able to trace them into the interlobular fissures. The absorbents may be always injected from the duct, and the bile is

[* Philosophical Transactions, 1833.]

frequently propelled into the former vessels by injecting the latter. Masgagni found that injections thrown into the ducts returned colorless by the absorbents. I have frequently made the same observations, but I as frequently found the injection in the absorbents of the same color as that thrown into the duct, and have frequently filled all the absorbents of the right edge of the lesser omentum with red size from the duct. In one instance, and in the only one in which the trial was made, the thoracic duct was injected with mercury from the hepatic duct. Lippi asserts that the lymphatics terminate not only, as has been hitherto supposed, in the thoracic duct and in the right subclavian vein, but that an infinite number of communications exist between the veins and lymphatics in other parts of the body." Gerlach* says, that the lymphatic vessels of the liver are easily filled by an injection into the hepatic duct; he also cites Thiele's observation, that after injecting the hepatic duct, the injecting material arrived in the lymphatic vessels sometimes with, at other times without the coloring matter. Beale makes the following remarks in regard to the lymphatics of the liver: † "Often, when too great force is employed, rupture of the walls of a small duct occurs, when the injection not unfrequently passes into a lymphatic vessel, and in this way, as was shown by Kiernan, the abundant plexus of lymphatics in the large portal canals can be injected. In one instance the injection passed into the thoracic duct. A similar result likewise occurred to me in a rabbit." He afterwards continues: "Although the lymphatics are so easily injected, I have not been successful in my attempt to ascertain how these vessels commence in the liver, and have not yet seen them distinctly in portal canals, less than the quarter of an inch in diameter." Mr. Natalis Guillot, in speaking of the lymphatics of the liver says: ‡ "It would be impossible to terminate the consideration of the biliary ducts without saying a word of the communications which seem to unite them to the lymphatic vessels. This peculiarity has for a long time been the subject of remarks by anatomists; however, the researches have perhaps

* Gerlach's Geroebelehre, II Auflage, p. 343.

† Beale on the "Anatomy of the Liver," p. 5.

‡ Annales des Sciences Naturelles. Zoologie, 1848, p. 167.

not been sufficient to demonstrate the manner by which the communications between these two kinds of vessels are established. The lymphatic vessels of the interior of the liver can not be seen until they emerge from the portal fissure; they are voluminous, and their diameter in the hog, dog, horse and man is that of a crow's quill. They can be traced throughout the whole length of the portal vein until they join the lymphatic vessels of the spleen and the mesentery. It is impossible to ascertain their origin in the interior of the organ.

It is possible, however, to know the manner in which the lymphatic vessels leave the superficial excretory ducts, belonging to the lobules situated immediately under the peritoneum.

In all vertebrated animals the lymphatics are very numerous on the surface of the organ. They are distinguished with the greatest facility from the excretory ducts, in observing the larger trunks which they join, and the manner in which they quit the liver to be distributed throughout the thickness of the peritoneal folds or upon the diaphragm. It is different, however, when following step by step the branches and ramuscules of these vessels, in proportion as their volume decreases. Their finest branches can not be further distinguished from the biliary vessels, and nothing characteristic divides them from the latter. Both sets of vessels are alike at their origin, and their anastomoses multiply in such a manner around each lobule, that all which can be detected in regard to their union is nothing but confusion.

When a colored injection is thrown into the biliary ducts, it immediately fills the lymphatic vessels, and renders them apparent.

Therefore, it is not by the structure or origin, that the lymphatic vessels differ from the bile ducts, it is only in regard to the direction which they take. While they are distributed over the surface of the lobules, blended with the biliary canals, injected at the same time and colored the same, nothing gives them a peculiar character. They are not recognized until a little farther, when, more voluminous and provided with nodosities in proportion as their trunks become larger, approaching the exterior of the organ to abandon its limits and to form a special system.

The lymphatic vessels of the liver form a very important part of that organ, for at their origin they resemble exactly the excretory ducts. The action of the liver is therefore double one part of the secreted liquids, taking its course through the biliary ducts being destined to enter into the intestine, while the other is carried through the lymphatic vessels to the ordinary avenues of the circulation."

Thus we see that Guillot not only noticed the phenomenon of a liquid injected into the duct and returned by the lymphatics, but also traced the latter to a certain extent towards their origin. His observations, however, lose much of their weight from the want of a more special description of the subject, accompanied by drawings.

But it is not only the fact of a colored liquid injected into the hepatic duct returning with or without color by the lymphatic vessels, that would lead us to suppose that a natural communication exists between these two sets of vessels; there are others which bear quite as strongly upon it. In the above quotation from Kiernan's paper, we find him stating, "that the bile is frequently propelled into the absorbents by injecting the duct." Furthermore, it has been noticed that in some diseases of the liver, after death the lymphatics of that organ are found distended with bile. Endosmosis into the lymphatics after death might be adduced as an explanation of the phenomenon, but if this were the case, the bile ought also to be found in the blood-vessels. Lehmann, in his discussion on the secretion of bile, says:*

"Jaundice very seldom occurs in diseases of the parenchyma of the liver, and almost never in the different forms of fatty degeneration or in tuberculosis of the liver, and very rarely in simple and red atrophy, in granular liver and hepatitis; while the only diseases in which it is almost constantly present are those of the biliary ducts and acute yellow atrophy." Further on he says:† "The lymphatics undoubtedly play a highly important part in the resorption of the bile, and these vessels are moreover alone able to absorb bile from the liver, as the venous plexuses of the hepatic artery open into the portal vein, and

* Lehmann's Physiological Chemistry, American Edition, vol. I., p. 478.

† L. c. p., 479.

would therefore convey the recently absorbed bile back to the hepatic cells. In the dead body the bile readily infiltrates the neighboring parts, but in living animals such is not the case; it is probable, however, that we might also observe a similar imbibition of bile during life, if it were not directly absorbed by the lymphatics surrounding and intersecting the surface of the liver, as well as the biliary ducts and the gall-bladder. It is believed that many substances undergo chemical changes in the lymphatics, but it is not known whether bile-pigment and the biliary acids are carried unchanged through the healthy lymphatic system, or whether they experience any alterations in it. We do not know, therefore, whether the lymphatics perform their function in those diseases in which icterus is present without any obvious organic changes in the liver, or whether, in addition to the jaundice, a large quantity of bile passes into the intestine." The fact that jaundice, as Lehmann remarks, is so very rare in diseases of the parenchyma of the liver, while it is almost constantly present in those of the biliary ducts, is an additional reason for suspecting a communication between the ducts and lymphatics. There can be scarcely any doubt left that the lymphatics of the liver play a most important part in the function of that organ. What the nature of that part is, we are at the present time unable to tell.

Judging from my observations in regard to the lymphatics of the liver, I am satisfied that the minute anatomy of the lymphatic system in general, and its relation to the blood vessels and other organs, would offer a large and fertile region for research. It is only to be regretted that a field, which most probably would yield an abundant harvest, has been left lying so long fallow by histologists.

In considering the double secretory functions of the liver, and the changes the blood undergoes during its passage through this organ, it becomes obvious that its structure must be more complex than that of other glands in the animal organism. The type of most of these is a follicle of fibrous tissue to which the blood is conveyed by an *artery*, and after having passed through a capillary network is carried off by a *vein*. The fibrous tissue lodges the blood vessels. The interior of the follicle is lined by

the secreting cells. If the ducts of a number of such simple glands join a common duct, a racemose or compound gland is formed; these in their turn may join to form larger ones like the salivary glands, etc. But, in all these cases, the blood which is conveyed to the organ, in order to furnish the materials from which the secretion is elaborated, is *arterial* blood, coming directly from the heart and having already undergone a change during its passage through the lungs. And this is true of all glands without regard to their office, whether their secretion is destined to subserve other ultimate purposes in the organism, or if merely excrementitious, the secretion is always derived from *arterial* blood. In the liver it is partially the reverse. And at the very outset of the investigation of the physiology of this organ, we cannot avoid being struck with the anomaly which distinguishes it from other glands in its physiological relation; for here, perhaps, the greater part of the blood that enters the gland is *venous*, loaded with nutritive matters, absorbed from the alimentary canal. This is not all, for the blood from the pancreas and spleen has also to pass through the liver before returning to the heart; and probably, the process of rejuvenescence of the red blood corpuscles, commencing in the spleen by their disintegration, is completed during their passage through the liver. Thus, the liver has not only the power to abstract certain materials from the blood which it converts into sugar or bile, but it also assists in the reformation of the blood corpuscles, the mechanical agents of that fluid.

As the success in histological researches depends in a great measure on the manner in which the tissues to be examined are prepared and viewed, I shall give, before entering on the description of the organ an account in detail of the various methods of investigation which I have successively pursued. The process of making minute injections, so essential to these researches, by means of an apparatus which I contrived for this purpose, will be fully described in the appendix to this memoir.

*Method of Investigation and Preparation of the Liver, and
Instruments employed.*

The investigation of the minute anatomy of the liver has al-

ways been considered one of the most difficult tasks in histology; yet, if properly commenced and pursued, it is really not so difficult as might at first be supposed.

To obtain satisfactory results from the investigation of this organ, a great amount of *patience* and *perseverance* are *absolutely* necessary. Besides, the investigation requires careful manipulation, accurate dissection and a skillful injector. Without a good minute injection, the anatomy of the liver can not be unraveled. Therefore, all statements that are based on observations, made solely on fresh uninjected specimens, should be received with great caution. The investigations, however, must not be limited to the injected liver; on the contrary, the uninjected specimen should also receive its full share of attention; yet it should never be forgotten, that in regard to the mutual relationship of the constituents of the organ, the former serve to guide the latter.

The mode of preparing the injected liver for investigation is very simple. Formerly, after it was injected, I was in the habit of cutting it into large slices and drying it. But this mode was attended with so many disadvantages, that I abandoned it entirely for the following method: The liver, being well injected with a weak solution of Canada balsam in ether, mixed with the coloring material, is put in alcohol, which hardens it to a certain degree. In this condition, it may be kept for a considerable length of time, always fit for dissection. For making very thin transparent sections, it is not, however, sufficiently firm; and therefore, after having selected some well injected pieces, they should be for a little while exposed to the air, until they have acquired the consistence of cartilage, when they are fit for use and may be put back, until they are wanted. The sections are made with the apparatus which I invented for that purpose.†

The fresh livers used for research, should be as recent as possible, and in a normal condition. These are easily obtained as long as the investigations are confined to lower animals. But when extended to man, it is more difficult, as the diseased condition, causing death, frequently involves organic changes in the liver. The best specimens are those from persons dying from

† The description of the apparatus with drawings of it, was published in the Amer. Jour. of Med. Sciences, Jan., 1859, p. 32.

accident, but these can seldom be obtained, except from the hospitals of large cities. As frequently several days elapse, before obtaining a fresh specimen, the investigator may fill up the interval with the study of the injected alcoholic specimens. A great deal of time is consumed in the examination of the fresh tissues, and unfortunately the recent liver does not remain fit for microscopical examination over a few days, even in weather of a moderate temperature. During the summer season I have frequently preserved fresh livers in an excellent condition for several days, by keeping them in a vessel of tin or glass, abundantly surrounded with ice.

All dissections should be made under water. For this purpose, dishes and saucers of various sizes, with a piece of cork or soft wood, into which pins may be easily stuck, cemented to the bottom, may be used. Some of them should be small enough to admit of being placed on the stage of the compound microscope, when it is desirable to make examinations with reflected light during the various stages of dissection. The finer dissections, of course, have to be made by the aid of simple lenses or doublets, of different magnifying powers. One magnifying from three to five diameters and another from eight to ten diameters will be sufficient for the purpose. As their aid is frequently required for dissections on the surface of the entire liver, or on large pieces of the organ contained in dishes, a separate stand or *loupe-holder*, provided with a long arm to carry the loupe, similar to that of Messrs. Powell and Lealand, is very desirable. It will be found of advantage to have this arranged in such a manner as to turn the arm aside, without moving the entire stand; this is accomplished by making use of two cylinders, instead of a prismatic rod, the one of which turns in the other; the rack, by means of which the arm is moved, being attached to the other. This stand may also be used in connection with the *dissecting stage*.

The *pins* used for holding the preparation to the cork or wood bottom of the dishes, should be provided with good points. Steel sewing-needles, provided with heads, (made easily of gum-shellac,) answer the purpose best.

It scarcely needs mentioning that the *scalpels* used for these delicate dissections, should be small and very sharp. For the

dissections under a magnifying glass eight to ten diameters, I use small needles, sharpened like a chisel at the point, and bent at the distance of about one sixteenth of an inch; this enables me to dissect instead of merely tearing the tissues.

The points of the *forceps*, used for the finer dissections, should be as delicate as needles, but strong and without teeth.

The *compound microscope*, used for these investigations, should be a *first class* instrument, provided with all the modern improvements and the best accessories for the various modes of illumination. The lenses, both objectives and eye-pieces, must be the *very best*. This is a point to which I cannot attach too much importance. Considering the improvements in the construction and the skill in the making of microscopic lenses, attained during a comparatively recent period, I cannot but suspect that many of the errors, committed in former histological investigations, have arisen from the use of instruments, the optical part of which was defective.

For the examination of injected specimens by reflected light, a strong condensing lens of no less than three inches diameter, and mounted on a movable stand, should be used.

A good *compressor* is another instrument, the use of which, for examinations of all kinds of injected specimens, must by no means be neglected. On the contrary, it is absolutely necessary, in examining different parts of the capsule of the liver.

Lastly, for minute dissections under high powers of the compound microscope, I will also mention the "*microscopic dissector*."*

The mediums which I have used most satisfactorily for examining specimens, are glycerine for the injected, and water for the fresh ones. Glycerine may also be used for mounting, but it injures specimens faintly injected with Prussian blue.

General Outline of the Component Parts of the Human Liver.

The human liver, like that of all vertebrated animals, is composed of three principal parts. The first comprising the blood vessels, ducts and lymphatics, which convey the fluids either to or from the organ; the second, the special instruments of secretion,

* See Amer. Jour. of Med. Sciences, Jan., 1859.

viz., the cells with free nuclei and granules; the third, the nerves which stimulate and regulate the functions of the organ.

The blood vessels conveying the blood, both venous and arterial, to the liver, are the portal vein and hepatic artery, which enter it at its inferior surface. Those conveying the blood from it, are the hepatic veins, which taking their exit posteriorly, join the ascending vena cava. The hepatic duct—carrying off the secretion of the organ,—the nerves and lymphatics always accompany the portal vein and hepatic artery.

The vessels and the duct, after having entered the liver, divide and subdivide until their ultimate branches have become small enough to pass into capillary networks.

The space between the branches of the vessels, etc., is occupied by the parenchyma of the liver, which consists of two capillary networks—perfectly independent of each other—the meshes of which are filled up by the hepatic cells, free nuclei and granules. One of these networks originates in the ultimate branches of the portal vein and hepatic artery, and terminates in the smallest branches of the hepatic veins; the other commences independently within the lobule and terminates in the finest branches of the hepatic duct and those of the lymphatic vessels.

In examining a piece of human liver with the naked eye, it appears to be divided into lobules. This appearance is caused by a mere dovetailing of the interlobular vessels enveloped in their sheath, with each other. In the hog, and a few other animals, however, the division into lobules is complete; each being separated from the other by a fibreus capsule, derived from the sheath of the blood vessels. Thus, each lobule in these animals might be considered a liver in miniature.

Like other abdominal viscera, the liver is everywhere (with the exception of its posterior surface (covered by the peritoneum. Prolonged duplicatures of this membrane form four of the ligaments by which the organ is suspended; the fifth, consisting of the remains of the umbilical vein of the foetus, is contained within the two layers of one of the other.

Besides the peritoneal covering, the liver has a special capsule of areolar tissue, which occupies an important part in its anatomy. At the inferior surface of the organ, this capsule is derived from

the sheath of the different vessels as they enter the latter; at the posterior surface it is blended with the areolar tissue surrounding the ascending vena cava. Its office is the same as that of all other fasciæ, that is, to support and connect the vessels and par-enchyma of the organ; its structure is not very dense. In some places it is more strongly developed than in others; this is especially the case in the neighborhood of the hepatic ducts and arteries, where it has a great number of vascular branches and glands to support. On the surface of the organ it adheres to the peritoneum, but, with care, both membranes can easily be separated.

From that part of the capsule which envelopes the whole sur-
face of the liver, prolongations proceed over the blood-vessels,
ducts etc., as they enter the organ, and, enveloping them as a
sheath of support, are extended to their finest branches, where
they at last disappear, by blending with the coats of the latter.
One of these prolongations, generally known under the name of
the "Capsule of Glisson," encloses the portal vein, hepatic artery
and hepatic duct with their lymphatic vessels and nerves;
another surrounds the hepatic veins with their lymphatics and
nerves—its existence was formerly denied. As these processes
of the capsule are strictly analogous in their structure and func-
tion, I shall, for the sake of simplicity, style them the "*capsules*
of the hepatic veins" and "*portal vessels*." If there be any exist-
ing difference between them it consists only in a stronger develop-
ment of the latter.

In the capsule of the liver, and in the prolongations derived
from it, there exists another system of special organs whose
functions are at present unknown. I refer to extensive plexuses,
formed by the ducts of an immense number of small glands,
which are either simple or racemose. These receive many fine
branches of the lymphatics, and communicate freely with the
hepatic ducts. Their extent is very great. We find them at the
inferior surface of the liver, covering the space between the
large hepatic ducts, before they enter the organ; also in the
capsule of the portal vessels—as far as the point where the inter-
lobular branches are given off,—and in that of the hepatic veins.
They are farther met with around the ascending vena cava,

where it passes the substance of the liver; in this situation I have found a very dense plexus of them communicating with the lymphatics. They exist also in the walls of the gall-bladder.

The *portal vein*, after having entered the liver, divides into two large branches which turn laterally. These, beside giving rise to several smaller ones, divide into two or three branches, one of which takes its course toward the posterior surface of the liver, the other toward its anterior margin, and the third toward its upper surface. From the last mentioned branches smaller ones arise which are distributed in the same radiating manner throughout the organ. The *hepatic veins* proceeding from the ascending *vena cava*, are usually—beside some smaller branches—two large trunks which turn forward while inclining laterally. From the root of these trunks, a smaller branch springs, which runs in a lateral direction, parallel with the posterior margin of the liver. Each of the two large trunks, while running forward, divides into two or more branches which proceed toward the margin of the liver in a latero-anterior direction. From the last division, smaller branches arise which are distributed, like those of the portal vein, in a radiating manner throughout the organ. The course of the branches of both sets of vessels is inclined toward the upper surface. The large trunks and branches of the hepatic and portal veins cross each other, while the smaller ones run almost parallel. The branches of the hepatic veins are remarkable for their straight course and for the sharp, more or less acute or even right-angles, which they form with their parent trunks. The course of the *hepatic artery* and *hepati duct* is the same as that of the portal vein. From the smallest branches of the vessels and duct just described, other subdivisions are formed and continued until the ultimate rami scales, resulting from this process, have become small enough to join their respective capillary networks.

(To be concluded in January Number.)

AET. IV.—*Cancer not Primarily Constitutional.* By S. LOGAN,
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WHILE there always have been a few pathologists who do not admit that this dreadful disease has been proven to have its origin in a “primary cancerous cachexy,” as Paget expresses it, the vast preponderance of authority upholds this view of the subject.

We have not yet, in medicine, quite shaken off the fascinating but dangerous habit of reasoning by the deductive process, whenever the safer method of induction fails to carry us as far as we desire. With all due deference to those great lights in our profession, some of whose honored names I shall have frequent occasion to mention in this paper, I would submit, that our current ideas concerning the nature of malignant diseases are in great part the result of *a priori* reasoning, and are not only unsupported by either clinical or pathological facts, but are contradicted by such data as these sources of information afford. In all the range of pathology we fail to find a subject of more serious import. In its study, therefore, we cannot be too careful to eliminate all possible sources of error. Our hopes of ever being able to combat the fearful disease more successfully than at present depends in a very great measure upon correct views of its pathology. In elaborating those views, then, nothing should be taken for granted without sufficient foundation in fact: no *a priori* reasoning should be indulged in; and if the clinical and pathological observations, upon which alone our conclusions should be based, fail to explain all the phenomena, it behoves us to stop as soon as we feel that we are leaving the solid foundation afforded by these facts, and verging dangerously on the floating prairie of deductive theory. That these safe limits have been transgressed, will, we think, be made to appear from the admissions of the able authors themselves, who are mainly responsible for the views at present almost universally entertained regarding these classes of disease.

An accepted theory will more or less affect our practice. If, for example, the profession at large yield an unqualified belief to the assertion that cancer is primarily a “blood disease,” the importance of very early operations is apt to be ignored; while

if it be considered as at first only a local derangement, with a fearfully unerring tendency to death through secondary effects, the earliest symptoms of its true character, or even a suspicion to that effect, would call for prompt intervention, if such action be practicable. The question, then, is of vital importance. Is the disease a primarily local affection, giving rise secondarily to the fatal general symptoms; or is the local affection determined by a special systemic cachexy, merely serving as a point round which the "blood disease," already existing, may concentrate its energies?

In order correctly to appreciate the relations of cause and effect involved in the phenomena of the disease, let us examine the premises assumed by both parties to the discussion, and compare their relative value according to the requirements of that method of inductive reasoning now accepted as the only safe system in scientific investigations.

But before entering into this critical analysis, it may be well to explain precisely what we mean by the expression *primary general constitutionality*. The kind of constitutionality which is predicated of cancer implies some general, systemic, or (if we may use the expression properly belonging to the old time humoralists), "*blood disease*," as the primary source or cause of the pathological sequences.

In support of the correctness of this definition, permit me to quote the words of one whom all admit as high authority, and to whose predictions I myself always pay the utmost regard as the utterances of a true philosopher, a clear thinker and a conscientious writer. He is also a strong advocate of the primary constitutionality of cancer. Paget says: "In the terms which are more usual in discussions respecting the nature of cancers, I would say that a cancer is from the first both a constitutional and a specific disease. I believe it to be constitutional in the sense of having its origin and chief support in the blood by which the constitution of the whole body is maintained; and I believe it to be specific, first, in the sense of its being dependent on some specific material, which is different from all the natural constituents of the body, and different from all the materials formed in the processes of disease, and, secondly, in the sense of

its presenting, in the large majority of cases, structures which are specific or peculiar, both in their form and in their mode of life." (Paget's *Surgical Pathology*, p. 632, American Edition.)

Again; Gross says: "They [malignant tumors] are all of constitutional origin, or connected with a contaminated state of the blood and solids." (*Surgery*, vol. 1, p. 302, edition of 1859.) Such, then, is a full definition of the kind of constitutionality which is affirmed of cancer, and which I have condensed in the words "*primary general constitutionality*." I use this apparently tautological expression in order to draw a distinction between the kind of constitutionality above defined by Paget and Gross (whom I select as fit representatives of the standard European and American authorities), and that supposed constitutional tendency, which, through the occult influences of inheritance, exhibits itself only locally, and concerning which no general previous cachexy is ever affirmed. As examples of the latter I may instance the well known hereditary character of hare lip, cataract, simple condylomata, moles, warts, etc.

With this understanding concerning the meaning of the term used, I proceed to a special analysis of the subject.

First.—On what clinical or pathological facts is the assertion based that cancer is essentially a "blood disease," or primarily of a general constitutional nature? They may be enumerated under the following heads: (a) Inheritance and family tendency; (b) the dyscrasia it exhibits; (c) its occurrence so exceptionally after injury, local irritations of various kinds, etc.; (d) its obstinate tendency to destructive ulceration; and (e) its great tendency to recurrence after removal in the same neighborhood or elsewhere. Let us examine them in detail.

(a.) *Inheritance and family tendency.* The per centage of cases traceable to inheritance is one-sixth, according to Paget, who says in reference to this phase of the subject, that the proportion "may seem too trivial to reason upon, yet it is larger than could be due to chance, and its import is corroborated by the fact of so many members of the same family being in some instances affected." Gross says: "Carcinoma is sometimes inherited, not however so frequently as is generally supposed. Besides, it should be remembered that there is a difference, and that a very wide one,

between the transmittability of this disease from the parent to the offspring, and its co-existence or successive development in different members of the same family. The latter occurrence, although also very infrequent, is much more common than the former, of which my own experience has supplied me with only a few examples." (Surgery, vol I, p. 323, ed. of 1859.)

I select these quotations from the mass of testimony on the subject to show the true degree of hereditary tendency, for the benefit of any one who may attach importance to this admitted feature of the disease, as a proof of its primarily general constitutional character. But inheritance does not necessarily prove this in reference to any affection. If it were so, then we would have equal reason to consider many strictly local infirmities as having the same claim to belong to that class. In fact, all we can say of the hereditary feature of cancer can be said also of many simple tumors and strictly local affections. Inheritance, in short does not prove blood contamination. Paget says: "Among seventy-seven patients with non-cancerous tumors, ten were aware of near relatives having had similar diseases;" and numerous observations of similar purport have been made by almost all the other authorities. According, indeed, to the above table of Paget, simple tumors would appear to be but little less frequently inherited than the general run of cancerous affections; while if we accept Lebert's calculation of one-seventh, the two classes stand in this respect on almost identically the same footing. Erichsen relates a case of simple lipoma, in which the direct pedigree could be traced back for three generations. Families are seen continually in which marked hereditary tendency shows itself in the production of the simplest and most innocent moles and warts. How often do we see these forms of cutaneous hypertrophic action occupying even the same positions in both parents and child! Shall we say then, that these simple growths are all primarily constitutional? Certainly we must if mere inheritance implies constitutionality. Inheritance, then, cannot prove that kind of constitutionality which is affirmed of cancer. It may theoretically be assumed to indicate a congenital predisposition to many affections either local or general in their nature; but to determine whether in any given class we have to deal with a

merely local or general disease we must look to other sources for information. Leaving this point then, let us consider the next.

(b.) The *cancerous cachexy* is considered by some as a proof of primary constitutionality. Paget speaks of a primary and of a secondary cachexy; and yet we have looked in vain for his description of the assumed "primary cachexy"; nor do the other approved authorities give us any greater satisfaction. If any of my readers will give the profession a demonstration, either clinical or pathological, of the features of this primary cachexy, I will yield the whole argument. But when we come to subject the current theory (which implies the existence of this "contaminated state of the blood and solids", or that the disease is "constitutional in the sense of having its origin and chief support in the blood") to the test of clinical and pathological investigation, we fail to find a single fact to support it. On the contrary, all we know of the cancerous cachexy from observed facts refers to what Paget calls the secondary cachexy. We really know no primary cachexy. It exists only in theory, and is as yet undemonstrated. The general symptoms all *follow* the local phenomena, and bear such relations to the latter as to indicate the logical sequence of cause and effect as clearly as in any other train of pathological phenomena. It is singular into what vagueness some of our best writers descend when theorizing on this subject. Dr. Lawson, the American editor of Hope's work, says that the assumption "that the blood is primarily vitiated in cancer is certainly opposed to all correct ideas of diseased action, is unsupported by facts, and, in fine, is insusceptible of direct proof." This would seem reasonable enough, and we would suppose that a mere hypothesis thus unsupported—to say the least—by facts would receive no countenance from him. Yet he, in the next breath, endorses the views of Walshe, and quotes him as follows. I give the whole quotation to show two things, first, how both authors contradict themselves, and secondly, how nearly the views of Walshe, contained in the first portion of the extract, approach to those now entertained by Virchow and others. "It may, we think, be fairly inferred, from facts hitherto ascertained that the *primary* [italics ours] seat of carcinoma is the intervacular interstices of all the organized tissues and parenchymata,

in rare instances possibly free serous surfaces and the interior of the veins. Wherever there are capillary vessels composing a nutritive or secretory apparatus, cancerous matter may be produced ; that it may be sometimes retained in these may reasonably be supposed, but there is at present no proof of the fact. Secondly, the proximate cause of the formation consists in a perversion of the acts of nutrition or secretion. But though we believe it unnecessary for the comprehension of cancerous development to admit that the material element of the disease circulates with the blood previously to its local manifestation—that cancerous vitiation of that fluid is the first step in the train of morbid changes—we do not mean to affirm that the blood possesses its normal constitution even at that period ; and further, we are persuaded, that, when *secondary* cancerous impregnation occurs, it must exercise a material influence on the activity and increase of local growths."—Confusion worse confounded ! In one breath it is affirmed that it is not necessary to suppose a primary "cancerous vitiation" of the blood, and in the next breath he does not "affirm that the blood possesses its normal constitution"!! Such is the inconsistency into which the mind is so liable to be entrapped when it attempts to theorize without facts.

It is plain that nothing is known of this "primary cachexy"; no clinical observations indicate its existence, no pathological facts can be adduced to prove its presence. The only cachexy we know of is that which show itself after the local development ; and the degree of this secondary cachexy is universally admitted to bear in general a direct ratio to the progress of the local disease, or the multiplication of it ; being, however, materially influenced also by the amount of suffering and the importance of the part affected, as well as the peculiar susceptibility of the patient.

The exceptions to this rule can be accounted for as reasonably as in other cases where inordinate general effects result from local disease ; and even if we are seemingly obliged to account for these exceptional cases by the supposition of some peculiarly depressing specific agency generated in the part, and affecting the system deleteriously, they by no means support the entirely hypothetical assumption of a *primary* general constitutionality.

On the contrary, the many cases observed in which the removal or destruction of, or the spontaneous cessation of activity in the local disease, have been followed by a decided amelioration of the general symptoms, tend the more to indicate the dependence of the latter upon the former. When we find a train of constitutional symptoms occurring only after the development of certain local phenomena, and bearing, as an almost invariable rule, a direct relation to the activity on the one hand, or the decline or cessation on the other, of those local phenomena—increasing in the first instance and decreasing, or even disappearing in the second—often ceasing, at least for awhile, after removal of the local disease, if this is early effected, and reappearing with its return, both the local and the general symptoms progressing, as a rule, *pari passu*—when such a direct relation is seen to obtain in innumerable clinical observations, what are we to conclude, but that the one set of symptoms depend upon the other? If we go beyond this conclusion, and take for granted a pre-existent as well as consecutive cachexy, we are merely *theorizing* without facts. But let this be expressed in the words of Paget himself.

"Concerning the state of the blood, our positive knowledge is trivial and obscure; perhaps it would be safest to say that we have at present none." And yet further on the author says: "The cancer state is not a total change of the blood, but depends, probably, on some definite material mingled with the natural constituents; and this material, we may believe, is derived from a morbid transformation of one or more of the natural constituents of the blood, and is maintained, as morbid structures are, by the persistence of the same method of transformation, *or by its own assimilative force.*" (Observe the words we have italicized). He continues: "But now, as to what this material is; or, again, is not. I believe it is not anything visible to the sight. There is not, so far as I know, anything in the blood of a cancerous person which we can recognize as a cancer structure." (Surgical Pathology, p. 636.) It will be observed that this author, as was the case with the one last quoted, and as is the case with almost all the other authorities, in one breath is forced to admit that we know nothing, whatever, of any pre-existent "vitiation" of the blood; while in the next breath—driven by the force of time-

honored theory—he takes for granted such a “primary cachexy.” Now, it is respectfully submitted that if we can explain the phenomena more satisfactorily by a theory based upon those clinical and pathological facts which present themselves every day to our observation, we are, in all reason, bound to accept and to act upon that theory, and free our minds from the shackles of an hypothesis, deriving its strength only from that conservative respect with which we are apt to regard the opinions of those distinguished and honored thinkers who have preceded us, and who were influenced—to a degree of which they themselves were unconscious—by the opinions and theories of their predecessors, who belonged to that age of mental progress when the human intellect overleaped itself in its wild efforts of deductive reasoning.

(c) *The occurrence of cancer so exceptionally after local injuries, irritations, etc., is considered as indicating a primary and general constitutional taint.*

That injuries and local irritations seem in a certain proportion of cases only to give rise to malignant disease is simply unaccountable. But it is not more so than the fact that the same agencies also seem exceptionally to cause other forms of hypertrophic and otherwise deranged local nutrition. If there be a logical necessity to infer a previous general constitutionality in the etiology of the one class of cases, the same necessity applies to the elucidation of that of the other class. If cancer is primarily dependent on a vitiated condition of the blood because it is only in exceptional cases that it follows blows, repeated local irritations, etc., then by a parity of reasoning, keloid growths—so exceptionally occurring in cicatrices, small-pox marks, etc.,—very many cases of simple tumors, neuromata after operations, etc., etc., must also be primarily constitutional in their nature. In 155 of 200 cases of tumor analyzed by Paget, no local causes could be assigned by the patients. Of these 155 cases 64 were innocent and 91 malignant. Of the 45 remaining cases attributed by the patients to some previous injury, etc., etc., 15 were innocent and 30 were malignant. If then, in 79, the total number of cases of innocent tumors, only 15 are attributed to previous injury of the part, and in 121, the total number of malignant growths, 30 are to be traced to a like local cause, these injuries are oftener

followed by cancer than by simple tumors; in other words, the exceptional feature of the apparent causative sequence (which is adduced as a proof, recollect, of primary general constitutionality) is more marked in the case of the simple than in that of the malignant disease!! What right then, let me ask, have we to say that cancer implies a previously vitiated state of the blood because only one case in every four and a half can be traced to local injury, when we bear in mind that only one case in every five and two-fifteenths of simple tumors are attributed to similar antecedents. If we take epithelial cancer we find the proportions greater. Paget uses the following words: "Among 34 patients with epithelial cancer, 19 were aware of injury or previous morbid condition of the affected part; a much larger proportion than is found among patients laboring under tumors of any other kind, except melanoid cancers of the skin."

In fact, these relations in the case of both simple and malignant tumors cannot be explained, and we have no more grounds in the one case than we have in the other, to take for granted any causative "primary cachexy." As was long ago observed by Lawrence (Hope, p. 268), we can no more explain these phenomena of diseased action than we can tell why the blood-plasma here gives origin to muscular fibre, there to nerve trunks, here produces bile, there saliva, etc., etc.

Paget, speaking of fatty tumors, remarks: "Lastly, respecting the causes of these tumors, few things can be more obscure. Nearly all knowledge on this point is negative. The growth may have followed an injury, and we may call this the cause of its formation, but we can give no explanation why such an event as an injury, which usually produces only a transitory impairment of nutrition, or a trivial inflammation, should, in these cases, give rise to the production of a new and constantly growing mass of fat." (Surg. Path., p. 379.)

Gross, speaking also of lipoma uses the following words: "The difficulty which surrounds the subject is not cleared up by assuming that they are merely hypertrophies of the natural adipose tissue. This is doubtless the fact, but we cannot explain why such an occurrence should take place at one point rather than another, or why, indeed, it should happen at all. The ex-

citing cause of the morbid growth has sometimes been traced to external injury, as a blow, contusion, or steady mechanical compression; but in the generality of cases no reason whatever can be assigned for its production." In both of these quotations we find an honest confession of ignorance. No baseless hypothesis is offered. But the case is different when these authors come to consider the malignant tumor. Here the theory of a primary cachexy or a cancerous vitiation, in subservience to time-honored custom, must be introduced, even though all the researches of modern science have failed to evolve from the dark mists which yet hang over the etiology of the subject, a single clinical or pathological fact in support of this view. As long as such reasoning is recognized and applied in treatment, our notions on the subject will prove but the "baseless fabric of a dream," while our practice will be no more successful than that of our great-grandfathers.

(d.) The *tendency to destructive ulceration* is adduced by some as an argument for the general constitutionality of cancer. Cancerous tumors in this respect differ from simple growths only in the greater activity and destructiveness of the ulceration. Paget himself says: "We can, indeed, in this particular, only observe a graduated difference between the innocent and the malignant diseases; for certain innocent tumors, if they grow very rapidly, are apt very rapidly to decay; and they may suppurate and discharge their ichor and débris with foul and dangerous ulceration. * * * * * The respective tendencies to ulcerate, can, therefore, be counted only as constituting differences of degree between the innocent and the malignant tumors. We may speak of a liability in the one case, of a proneness in the other." (P. 326.) The other authorities express almost the same views, and I need not therefore overburden this paper with another quotation on this phase of the discussion, nor need I add any remarks of my own. I simply adopt those of the above quoted distinguished advocate of the "primary cachexy" theory.

(e.) The *marked tendency to a recurrence* of the disease, either at the original site or elsewhere, is considered as indicating a primary general constitutionality. Let us examine the phenomena of this recurrence.

"It is often stated, as a rule," says Paget, "that those cancers are least likely to return (it shou'd be said, to return quickly) after removal, which have followed the receipt of injury, or some previous disease in the part. Now this is only partially true; it is probably often true of the epithelial cancers that have grown in the seats of repeated injury, of frequent ulceration, and the like; but I know no facts relating to scirrhus and medullary cancers that will support it; and I believe that the cases in which cancers follow quickly after accidental injury, are just those in which a speedy return may be anticipated after operations. The growth of a cancer immediately after an injury implies the existence of an intense cancerous diathesis, which no removal of the cancer is likely to affect; but when a part has been repeatedly injured, and only at length becomes the seat of cancer, it implies such a low degree or state of cancerous diathesis, as we may expect to remain long "latent," if the slowly prepared locality, with all that has grown in it, be cleanly removed." Here, to my view, is another instance in which a mere hypothesis is made to becloud the main features of the subject. What grounds have we for the assertion, that: "The growth of a cancer immediately after an injury [or, indeed, even its prompt return,] implies the existence of an intense cancerous diathesis"? Why shculd we go beyond the visible local phenomena? Is it not much more reasonable to say that such a rapid development, or prompt return of the tumor, implies a highly active *local* derangement of nutrition? Is not this actually *what we see*? Shall our theory of the disease then be built on what we see or what we gratuitously suppose; on the demonstrated facts presented directly to our observation, or on the hypothesis handed down to us by our forefathers? We see a disease characterized at first by well known local phenomena and by local phenomena alone. When carefully studying these phenomena we find that they resolve themselves into a peculiar vitiation of local nutrition, characterized by a more or less active habit of excessive and depraved cell-genesis. This continues locally until the diseased habit has impressed its peculiar abnormal vital action upon a greater or less amount of the immediately surrounding tissues. We see that, like all other vital habits, it steadily increases in force as it

continues. At a certain stage the tumor is removed; but can we hope to remove a vital habit when it has acquired a confirmed local tendency? We find from clinical experience that we cannot, as a rule; but that the sooner we do operate, and the more tardy the rate of progress has been before the operation, the better chance for the patient. The local peculiarities, then, are the main conditions which determine the result, the recurrence or the cure; and we have no right to go beyond these visible facts to grope in the dark for some undemonstrable diathesis. The only diathesis we can *show* is that plainly brought about by the continuance of the local disease to an extent and with a virulence of activity fully sufficient—in its exhaustive drain of vital force, in its pain, its functional derangements, its self-multiplication by a still further extension of the deranged habit of nutrition, etc., etc.,—to account for the sad result. That the tendency to recur bears this direct ratio to the extent and activity of the local disease is confirmed by universal experience. Gross says: “The cases which have done best in my hands, after operation, were females with scirrhus breasts, which, *after having been long in a quiescent state* [observe these italicized words] at length assumed a threatening ulcerative tendency, or which had actually, *in a slight degree*, yielded to this process. Epithelial cancer is less liable to recur after extirpation than scirrhus, encephaloid, or melanosis. *Removed in its earlier stages*, there is occasionally a strong probability that there will be either *no relapse at all*, or only after a considerable period.” The reason is plain. Epithelial cancers show a less active habit of depraved local nutrition.

Some tumors which cannot be claimed to be cancerous also present this tendency to recur after removal; and it is interesting to observe that it is just in those growths in which the microscope shows that the habit of irregular nutrition is most marked and most active, that the tendency to recur is most frequently observed. Examples illustrative of this fact are afforded by the recurrent fibroid, the enchondroma, the fibro-plastic, and the whole class of nucleolated sarcomatous growths, as well as these peculiar developments sometimes appearing in the site of cicatrizes, called keloid tumors, and which Damon in his recent work

on the "Structural Affections of the Skin," affirms to consist of the excessive production of cellular tissue, whose "areolæ contain masses of oval nuclei," thus showing its tendency to deranged cell genesis or abnormal nutrition. Again; we observe that as a rule, the diffused tumors are the ones to recur, the circumscribed not. The limits of the former are not readily definable; those of the latter are. There are, however, but very few simple tumors that are diffused; the various forms of elephantiasis may by some be so regarded, and they are apt to recur after removal.

In fact the essential difference between the simple and the malignant diseases is referable to the varying degrees of depraved activity characterizing the derangement of the local nutrition, ranging from the most torpid hypertrophic action, producing the various homologous tumors, to the fearfully rank and depraved mode of cell-genesis, which gives rise to the so-called heterologous formations. So correct is this generalization of the whole subject, which brings together under one law of production, these, in many other respects widely differing phenomena, that nosologists have invariably been forced to acknowledge their inability to draw a distinct line of demarcation between the simple and admittedly local affections; and the malignant and hypothetically assumed-to-be constitutional diseases. Hence the necessity of a semi-malignant group. The very admission of the necessity for this classification affords a presumption against the theory whose claims are under discussion. Exclusive of those cystic formations which are referable to derangements of secretion of certain organs, all tumors are referable to depraved habits of nutrition, the differences between the simple and the malignant classes, great as they are, being of degree, not of essential nature. In medicine, as in all science, the better we understand the facts we observe, the larger the generalizations we are able to make, the more plainly, in other words, do we perceive that tendency to unity in diversity in all things so ably discussed by Herbert Spencer in his "First Principles."

So much for the arguments of the advocates of the primary general constitutionality of cancer.

In the second place let us examine the facts in favor of the primarily local nature of the disease. In analyzing the reasons

adduced for the opposite view I have gone so much into details, bearing upon both sides of the question, that much of what might now be said has been already presented. It might simply be stated that all the clinical and pathological facts which we possess point us, if we divest our minds of all preconceived theoretical considerations, to a primarily local affection, characterized by a peculiarly depraved and obstinate derangement of the nutritive habit of the part; that unless the part be early removed this deranged habit of nutrition acquires force, as the rule, in a fearfully accelerated ratio, till it knows no control, and rapidly extends itself (as a depraved habit—not only in a material sense—the term infiltration with cancerous material being, in this view, in a measure incorrect, as it only expresses the result and not the process itself), first, to the parts around, and ultimately to even the most distant regions, acquiring still greater force as it continues, and drawing more and more upon the vital resources of the system. All the facts we possess accord with this view, and can be grouped under no other generalization. We cannot, of course, explain what starts this train of morbid action; we only see it beginning in a *part* and spreading with unerring fatality to affect the whole. But in order to submit this view of the disease to the test of collected facts, let us go a little more into detail. Let us enumerate those features admitted to be specially characteristic of malignant disease, and examine our theory by the light of these clinical and pathological *facts*. We cannot do better than adopt for our purpose the following enumeration, given by Paget, of the chief characteristics of malignancy:

1st. Heterologous structure; 2d. Infiltrating tendency; 3d. Ulcerative tendency; 4th. Softening and mode of ulceration—*i. e.*,—with no disposition to heal but certainly extending, base and margin being cancerous. 5th. Power of propagation in part or remotely. 6th. In progress or multiplication confined to no tissue. And I might add to the above enumeration another feature, strangely omitted by the distinguished author—*i. e.*, 7th. Its almost uniform tendency to a fatal cachexy.

Such then are the characteristic features of malignant disease. We judge of the nature of a disease by its characteristic features. Is there a single one of these which gives any ground for the

assertion of a "primary cachexy," or indicates a "previously vitiated state of the blood?" On the contrary do they not all point to a primarily local affection, leading secondarily only to its fatal systemic disturbances?

The *local origin* of cancer is no new idea. Hodgkin's notion of its being of the nature of simple or multiple cystic growths implied this view of the subject; and such was the case too with Adams' and with Baron's ideas. They considered cancers as hydatids; and the various tumors were classified by them as "hydatida lymphatica," "h. cruenta," "h. carcinomatosa," etc. Baron referred both cancer and tubercle to hydatids, and here we may see a hint of the recently advocated views of the relations of cancer and tubercle. The idea that it is primarily a local excess of cell-genesis was announced by Muller soon after Schwann had established the great fact of the cellular origin of all organic structures; while Walshe, as will be seen from the following words, anticipated, in a measure, the recent ideas of the growth commencing in a deranged development in the corpuscles of the cellular tissue. "It may be fairly inferred" said he, "from facts hitherto ascertained, that the primary seat of carcinoma is the intervascular interstices of all the organized tissues and parenchymata, in rare instances possibly free serous surfaces and the interior of the veins."

In short so far as exact researches warrant us in going, we only know the disease as primarily a local pathological process—not a specific thing added to the system, but a derangement of the normal physiological act of nutrition. We are too apt to look upon diseases as entities, and therefore to expend our energy in hunting up some presupposed "*materies morbi*." Pathology, in by far the majority of cases, is physiology gone astray. And so it is here. All the above-mentioned characteristics of malignant disease lead, when carefully examined, to this conclusion. Let us examine each and see if this be not so.

1st. The so called heterologous structure of the cancer material. This feature is not absolute, but only relative to the part in which it is located. The cancer cells do find their parallel in the tissues of foetal life, and are markedly similar to many of the cellular elements, of many parts which are the subject of active cell-genesis.

This is admitted by all pathologists. At any rate, all we know of them is as primarily local phenomena.

2d. The "infiltrating tendency," to use an objectionable term, is, as the word itself implies, a local phenomena.

3d. The ulcerative tendency: this too is simply a local phenomenon.

4th. The tendency to softening with no disposition to heal is a local phenomenon.

5th. The power of propagation in the near parts or remotely: the very term used implies a primarily local affection, from which the propagation takes place.

6th. In its progress or its multiplication it is "confined to no one tissue,"—confined to no one tissue because the universal function of nutrition is confined to no one tissue, and every fact we observe indicates that cancer is a derangement of this universal function, at first locally seen, and *propagating* the abnormal tendency—or in other words deranged vital habit—to other parts. The use of the term "multiplication" implies as much.

7th. The uniform tendency to a fatal cachexy: I have already pointed out the dependence of this cachexy on the degree of activity and the extent and special site of the local disease, and need not go over the same ground again.

I have refrained from quoting many authorities to support the statements made, for fear of unnecessarily extending this paper. Those I have cited pretty accurately represent all.

And now, from the considerations adduced, I think that the following propositions are established:

1st. The earliest reliable evidence we possess of the presence of malignant disease is the exhibition of certain local phenomena.

2d. These local phenomena consist in a peculiar derangement of the vital action or the nutrition of the part.

3d. This derangement of the local nutrition shows itself as a marked tendency to depraved cell proliferation.

4th. This tendency to depraved cell proliferation, as a rule, acquires greater and greater force the longer it continues, impressing its peculiar habit of deranged action on the nutritive processes, first of the parts immediately around, and sooner or later upon those also of more or less distant portions of the body. To use Paget's words in respect to the lymphatic system—"The lymphatic glands usually become cancerous in direct succession

from the primary disease ;" and when referring to the manner in which the tumors spread in other parts, as if " by radiation," he says: " We find them, as it were, springing up in an area which gradually widens, and of which the primary cancer is the center." When speaking of the multiplication in more distant parts, he uses the following words : " The organs in which the secondary cancers formed by multiplication are most frequently formed are the lungs and liver—the latter especially, in cases of cancer of the abdominal viscera, the former especially in those of the breast, limbs and other parts whose blood passes to the vena cava." The mode of spreading and the multiplication thus indicate a local origin.

5th. This species of malignant depraved nutritive action is most apt, primarily, to affect those parts whose vascular supply is most liable to frequent variations, and whose nutritive processes are therefore most frequently disturbed in their uniform action ; as, for example, the neighborhood of exposed mucous outlets, the neck of the uterus, the mammae, the œsophagus and stomach, etc.

6th. Circumstances acting upon the system at large have not been shown to exert any influence upon the production of this supposed constitutional disease ; but local conditions are seen to have a decided influence ; e. g. soot in chimney sweepers' cancer, repeated local irritations, blows, various forms of derangement of local nutrition. Paget says : " The richest and the poorest alike seem to be subject to it ; so do the worst and the best fed ; those that are living in the best conditions of atmosphere, and those that are immured in the worst ; those that are cleanly and those that are foul ; those of all temperaments, and of all occupations (except such as have peculiar local influences) ; [observe the exception], those that appear healthy, and those that are diseased, except those with some few specific diseases," etc.

7th. Sometimes, as if showing the tendency of the disease to excessive cell-genesis and over nutrition, the normal structures in the immediate neighborhood undergo concurrently a process of hypertrophic nutrition ; e. g., the excessive development of fibrous tissue in scirrhus, the bony plates in bone cancers, etc.

8th. The depraved local action in cancerous affections soon

affects the system deleteriously, producing a cachexy which bears a uniform ratio to either the extent of the local disease, the inherent *activity* of the same, the importance of the part involved, and the degree of suffering, or two or more of these combined,—taking due notice also of the variable degrees of constitutional power to resist such drains upon the vital powers possessed by different patients.

9th. The relations last mentioned are in some case clearly proven by the temporary amelioration and occasionally permanent relief at times afforded by the removal of the local affection early and thoroughly.

10th. The chances of amelioration or cure are greater in proportion to the promptness and the completeness of the removal of the whole area whose nutrition is deranged, and in an inverse ratio to the degree of activity it has evinced.

11th. Cancer, unlike constitutional affections, is never symmetrical, and seldom, if ever, primarily multiple.

If the reasoning adduced in this paper warrant our acceptance of the above propositions, then two practical conclusions must be recognized. It is mainly on account of the importance of these conclusions that I have presumed to invite the profession to a careful reconsideration of the views so generally held, and have endeavored to oppose to them the opinions I have myself entertained for the last two years. The subject has recently been also agitated in England, by Mr. Moore and Mr. De Morgan, before the Pathological Society of London ; and these gentlemen take nearly the same view as myself.

The practical conclusions I allude to refer, the one to diagnosis, and the other to therapeutics. First ; if my views are correct, it becomes of the highest importance that we should pay the utmost attention to an early recognition of the symptoms of this fearful disease. Its *early diagnosis*, then, always important, becomes infinitely more so, if we recognize it as primarily a strictly local disease. Let us watch then with careful suspicion all doubtful cases, and let us endeavor, by the accurate record of all such cases, to increase our facilities for an early diagnosis of malignant disease.

Secondly. Having diagnosed the slightest tendency to malig-

nant action, we should not wait for the habit to become confirmed, but operate at once, and cut wide of the disease. I would even go further, and operate even if there be but a suspicion of malignancy. I cannot but think that if we, as a profession, had not been pre-occupied with the idea of a previous "contaminated state of the blood" or a "primary cachexy," we would be more awake to its earliest local indications and more prompt, and proportionally more successful, in preventing its fatal career.

Even now, with our comparatively tardy recognition of its presence, we find that we are more successful the sooner we interfere and the less active the morbid action. Let us profit by the hint, and endeavor to increase this success by an earlier diagnosis and an earlier removal of the part and the neighborhood affected by this new and depraved vitality, so inconsistent with the normal process of uniform and harmonious nutrition, this rebellious "*imperium in imperio*," which ever increases its power by continuance, and in the end extends its peculiar vitality until it fatally involves the whole economy.

The length this paper has already attained precludes the possibility of my going into details regarding the extremely important subject of the early diagnosis of malignant action; nor have we a sufficient number of clinical facts yet collected to warrant us in making any positive statements as to when we may be sure that this kind of action has begun. We can only now affirm that as soon as the features characteristic of the developed disease—*i. e.*, peculiar pricking pain, tendency to diffusion and more rapid growth, increasing vascularity etc,—show themselves in the slightest degree, especially in a suspected locality and where we can cut freely, we should act, act boldly and without a day's delay.

CLINICAL MEMORANDA.

FROM CASES TREATED IN THE CHARITY HOSPITAL, AND BROUGHT BEFORE THE MEDICAL CLASS, UNIVERSITY OF LOUISIANA, SESSION OF 1868-9.

Cerebral Embolism—Brain Softening. PROF. HAWTHORN's Clinic.

(Continued from July Number New Orleans Journal of Medicine.)

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THIS case illustrates well the difficulty of diagnosticating accurately the nature of brain disease. The suddenness of the attack left the question between acute softening (?) and effusion of blood. The fact, though, that the symptoms were not progressive from mild to severe, but that their intensity culminated with their beginning, diminished the likelihood of so-called acute softening. In other words, since we know as much as we do now of thrombosis and embolism, the decision leaned strongly towards a blocking up of some one of the cerebral vessels. The softening found after death was, I am convinced, the result of arrest of circulation through the vessel supplying that part of the brain involved. I am inclined to the opinion that all cases of "acute softening," except those from inflammation, have a similar origin. There is no process with which we are familiar, other than direct violence or chemical action, capable of breaking down the organization of any tissue instantaneously.

Waste and nutrition are more active in the nervous than in any other structure, and even the most temporary diminution or loss of blood-supply to it is accompanied by depression or abolition of function. Of this we have a familiar illustration in fainting from weakened action of the heart. It was long ago observed that ligation of the common carotid artery produced immediate disturbance of the side of the brain supplied by the vessel tied. This disturbance was only temporary, however, because of the readiness with which a collateral supply of blood was established through the circle of Willis to either hemisphere of the brain. But when complete arterial obstruction occurs above the base, paralysis takes place and comes, too, at the very moment of obstruction. The vessels distributed to different portions of the brain do not communicate after entering its substance, and, consequently, the worst effects of innutrition—complete death—must

result to any part of the brain depending for sustenance upon an obstructed vessel.

It will be remembered that there was no loss of intelligence in this case and that the autopsy exhibited the grey substance of the brain as forming an investing shell for softened white matter. This exemption of the grey substance from the softening process is explained by the fact that it receives its blood supply chiefly through the collateral capillary vessels (of the *pia mater*) instead of from those which nourish the central portion. This furnishes us a valuable hint for the differential diagnosis between cerebral haemorrhage (apoplexy) and embolism ; especially if the haemorrhage be either considerable, be in the substance but near the surface, or be progressive. Idiopathic haemorrhage on the surface of the brain is comparatively rare, and when it does occur we should have loss or impairment of intelligence *without* paralysis, —unless, indeed, the clot be of such size as to exert remote pressure on the motor tracts. On the other hand cerebral haemorrhage generally takes place within the white matter or central mass, when there is early and probably gradually increasing paralysis. But provided the clot becomes sufficiently large or is sufficiently near at the beginning to press upon the grey matter, we should have a greater or less degree of impairment of intelligence ; and this having been moderate, perhaps, at first gradually increasing *pari passu* with the growing clot until complete coma is reached. Then the instantaneous occurrence of hemiplegia without disturbance of the intellectual faculties, the symptoms not progressive but as well declared at the commencement as at any subsequent time, would give us strong presumptive evidence of cerebral embolism.

This case furnishes us, too, a very satisfactory illustration of the manner in which cerebral emboli are perhaps almost, if not always produced.

The conditions favorable to the coagulation of the blood within blood-vessels during life, are : 1—*a highly fibrinized state of the fluid* ; 2—*a languid state of the circulation* ; 3—*the presence of an uneven surface over which it flows*. I have repeatedly known sudden deaths to follow slight exertion (as that of sitting up in bed) in the course of an acute inflammatory attack. I think this

is rather more common in pneumonia than in any other disease. Those who are accustomed to making post-mortem examinations are familiar with the frequency of heart-clots, in great measure washed of coloring matter and evidently formed towards the end of life. Dr. Meigs called attention to the frequency of death from the occurrence of clot in the hearts of puerperal women, especially in those who, after severe uterine haemorrhage, too early assumed the upright posture. Syncopy in feeble subjects under other circumstances sometimes ends fatally in the same way, and we do not forget to enjoin absolute quiet on those to whom we are giving such sedatives as veratrum viride, digitalis, and aconite. Under all these circumstances, two or three conditions above designated are present—*i. e.*, a languid circulation and an irregular surface, the inner surface of the heart.

I entertain no doubt that the plug found in this man's middle cerebral artery had its origin in a small fibrinous mass (embolus), which, becoming detached from the thrombus (or clot *in situ*) in the carotid artery, was washed onwards until it came to a tube too small to allow it to pass further. He was much weakened by long continued diarrhoea, his circulation was feeble, and the little ribbon-like bar encroaching on the calibre of the vessel, sufficed to separate a portion of fibrin from the blood. Complete paralysis followed the plugging of the artery, and the arrest of nutrition to that part of the brain to which it belonged, and the softening came merely as a secondary consequence thereof.

From all this we can readily trace the connection and mutual dependence between diseases of the kidneys (all included under "Bright's Disease"), diseases of the heart, and paralysis,—viz. Retention of urea in the blood from inability of the kidneys to discharge their function properly; endocarditis as a consequence; fibrinous clot loose in the circulation and finding lodgment in one of the cerebral arteries.

Nothing is to be said about the treatment of such cases other than, that, like apoplexy, they are to be let alone. The bladder should be regularly attended to and emptied, the bowels moved by enemata, and nutritious, easily digested food given. The result will depend more on the site and extent of the brain substance from which blood has been cut off than upon anything else.

Memoranda of Surgical Clinic: By T. G. RICHARDSON, M.D.,
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STRICTURE OF THE URETHRA.

THE number of cases of stricture of the urethra that presented themselves during the course was unusually great; and they were generally of an almost inveterate character. Many of them were complicated with perineal and scrotal fistulae, and in one of these there was undoubtedly complete obliteration of the calibre of the urethra for a very short distance in front of the fistula.

In no case was there more than one stricture, although in several this was of considerable length. The situation was almost invariably at the junction of the spongy with the membranous urethra, or in this immediate vicinity.

As the cases were for the most part of long standing—some of them ten or fifteen years—and had been totally neglected or only irregularly treated, the consistence of the strictures was almost uniformly firm and hard, and in at least one case the obstruction possessed all the toughness and elasticity of whit-leather. The degree of narrowing was so great in nearly all, that it was only after persistent efforts, repeated every second day for a week or more, that an instrument of the smallest size could be introduced.

The treatment in all of the cases except four, was simple dilatation with metallic bougies. The result was satisfactory in the main—that is to say, in the course of a few weeks a No. 10 or 12 bougie could be introduced without difficulty, and the patients were discharged with directions to insert the largest sized instrument once or twice a week for a month or two; then once every week or ten days for the same length of time; and, finally, once every two or three weeks for six or eight months, or longer if there should be tendency to contraction. Scarcely any case of confirmed stricture can be permanently cured in less than a year from the commencement of the treatment, and many require a much longer period.

The patient referred to, in whom the stricture presented so great elasticity, was a young man of twenty-eight years of age, who, before his present trouble, had a remarkably vigorous constitution. He had been under my care two years previously, and the contraction then extended from about the middle of the spongy urethra far

back into the membranous division. There were several fistulous openings in the perineum and scrotum, and the tissues around were much hypertrophied and indurated. About two-thirds of the urine was discharged through the unnatural channels, and the balance in the form of a very fine twisted stream, through the external meatus. At the first trial no instrument could be made to pass the stricture, and a wax bougie, carried down and pressed gently into the obstruction, presented, when withdrawn, a regular corkscrew cast. By repeated efforts, continued every alternate day, a No. 3 steel bougie was passed in the course of a week or ten days, and in about a month, a No. 10 could be carried through without using any great force, although its withdrawal was attended with some difficulty. The latter size was continued for several weeks, but it was constantly observed that in less than an hour after each sitting the stream of water was reduced to the same small size as before the introduction—not from spasmotic contraction, as there was scarcely any sensibility in the parts, but from the elastic nature of the stricture. The character of the stricture having been thus clearly revealed, and the inutility of farther attempts to produce absorption by dilatation, it was concluded to perform the perineal section. This was done, and the main fistulous tract opened up to its commencement in the usual pouch behind the stricture. A large-sized catheter was kept in the bladder for some days, and the divided tissues gradually healed by granulation. The patient was now enabled to use the bougie himself, and went home with instructions to persist in the use of the instrument at least once a week for several months. Upon his return to the city after, as already stated, nearly two years absence, his condition was almost hopeless. There had been no improvement since his departure and in a short time he had abandoned the use of the bougie. New abscesses formed in the perineum and scrotum, and, upon examination, I found evidences of urinary infiltration extending down upon his thighs and forward upon the abdomen. His general health was completely shattered, he was much emaciated, and irritative fever was scarcely ever absent. Under these circumstances there was nothing to be done but to make free incisions into the perineum to permit the escape of the urine, and support the system by means of nourish-

ing diet and stimulants. But these measures proved of no avail, and the poor fellow died in about three weeks from the time of his return.

The four cases in which dilatation was not resorted to at the commencement were operated upon with Holt's Stricture Breaker. In three of these cases the operation was successful, but in the fourth a fatal termination ensued in fifty-two hours. The patient in whom this unfortunate result occurred was quite comfortable for four or five hours after the operation, when, upon attempting to pass his urine for the first time, he was seized with excruciating pain in the neck of the bladder and perineum, which was only partially subdued by morphia, when another effort to empty the bladder brought on a recurrence. It was evident that extravasation of urine had occurred, but as it did not show itself beneath the skin it was not deemed justifiable to make incisions. Irritative fever set in almost immediately, followed rapidly by muttering delirium and death. No *post mortem* examination was made. I learned after the man's death that he was in the habit of indulging freely in spirituous liquors; and that on the evening before the operation he was out upon a drinking frolic until a late hour at night. The stricture was at the usual site, and admitted before the operation a No. 3 bougie.

No definite opinion can be drawn from the results in these four cases as to the value of Holt's instrument. It has been extensively used in London and New York, and the general verdict is in its favor, but it is capable of doing great damage and requires the utmost care and skill in its use. With the large class of practitioners dilatation must still be the rule.

Summary.—The following are some of the practical deductions urged upon the students as worthy of being kept constantly in mind

1st. There is, properly speaking, no such thing as spasmodic stricture. Spasmodic contraction of the urethra is not uncommon, but seldom offers any serious obstacles to the flow of urine, although it frequently arrests the passage of the catheter or bougie. As it has no appreciable anatomical character, it should not be confounded with true stricture.

2d. Stricture is not therefore a *contraction*, but a narrowing of

the urethra produced by a deposit of organizable lymph, generally in the sub-mucous areolar tissue. Its most common cause is chronic gonorrhœa.

3d. Complete obliteration of the urethra can never take place except there be some other outlet for the urine, as in perineal fistula, and even then is an exceedingly rare occurrence.

4th. The secondary effects of stricture, resulting from imperfect emptying of the bladder, chemical changes in the retained urine, violent and repeated efforts at micturition, etc., are serious, often irremediable, and not unfrequently fatal. The most common of these results are dilatation of the urethra behind the stricture, perineal abscesses and fistulæ, enlargement of the prostate gland, chronic cystitis, hypertrophy of the muscular coat of the bladder, dilatation of the ureters, chronic inflammation and destruction of the kidneys, retention of urine, etc.

5th. Stricture may occur in any part of the urethra except the prostatic, but is most frequently found at the junction of the spongy and membranous divisions; from which point it extends in both directions, but to a much greater extent forward than backward. When it exists near the external meatus, a second one probably exists at the usual site. The number seldom exceeds two, although there may be more, but in the large majority of cases there is but one.

6th. Strictures differ very materially in their consistence, depending mainly upon their duration, and the irritation to which they have been subjected, whether by the habits and neglect of the patient or unskilful treatment. Upon this difference, all other things being equal, depends the length of time required to effect a cure.

7th. No symptom of stricture is pathognomonic. The only test is the bougie or catheter in the hands of a skilful surgeon.

8th. The specific object of all radical treatment of stricture is the removal by absorption of the morbid product upon which the narrowing depends.

9th. Several methods of producing absorption are known to the profession; but the one which is almost universally acknowledged to be superior to all others, and applicable to the great majority of cases is local pressure.

10th. The only available method of employing local pressure is by means of the bougie or catheter. The name, "dilatation," by which this method is called, is badly chosen, inasmuch as it conveys an erroneous idea in regard to the process of cure.

11th. Every other means of treatment, such as internal incision, rupture, perineal section, cauterization, etc., are subordinate to the bougie, and applicable to a limited number of cases.

12th. Whenever practicable, preference should be given to the stiff metallic bougie or catheter. In very narrow strictures, however, it is safest to begin with the pointed gutta-percha or gum-elastic instrument. The use of a metallic bougie of a less size than No. 3 or 4 demands the most accurate anatomical knowledge and a most experienced hand, and even then sometimes does great damage.

13th. All strictures which admit a stream of urine, however small, may be passed by an instrument, although persistent efforts, and often more than one sitting are required.

14th. The bougie should not, with rare exceptions, be introduced oftener than once in forty-eight hours, and in many cases cannot be used with advantage oftener than once in three or four days. Except where there is reason to fear retention of urine, it should not be allowed to remain longer than ten or fifteen minutes.

15th. When, after gradually progressive dilatation, a No. 11 or 12 bougie can be readily passed, the patient may be entrusted with the use of the instrument himself, positive instructions being given to pass it at least once a fortnight for two or three months, and subsequently, once a month for a much longer period. *No stricture should be considered permanently cured in less than twelve months under the most favorable circumstances, and most cases require a longer time.*

16th. Constitutional means are of great assistance in the treatment of stricture. The remedies to be used will depend in a great measure upon the state of the system. Where the general health is good and the stricture recent, much advantage may be derived from the salts of mercury and potash, given with proper circumspection.

Other local means besides dilatation may be discussed at some future time.

STONE IN THE BLADDER.

Cases of stone in the bladder, never very numerous in this locality, have been almost wanting during the past season, but one having been presented for operation.

Calculus disease occurs in the United States most commonly in Kentucky, Tennessee, West Virginia, Missouri, and the Southern sections of Ohio and Indiana. Taking the boundary line of Kentucky and Tennessee as a starting point, it *progressively* diminishes in a Northerly or Southerly direction. It is exceedingly rare in New England, and along the shores of the Gulf of Mexico it is scarcely more common. In looking over my own list of operations, I find but two cases which originated in this city : most of the number came from the middle and northern sections of Mississippi. Although for some years, a resident of Kentucky, where I had the opportunity of seeing a great many cases in the practice of my preceptor and personal friend, Professor Samuel D. Gross, M. D., I have never seen the disease in the negro, but am aware that it does occasionally occur in that race.

As is generally known, the cause or causes of calculus are undiscovered. It has been variously ascribed to drinking limestone water, peculiar diet, occupations, etc., but the question is still undecided. Two facts bearing upon this point are established : First, that it occurs most frequently in limestone countries ; and, second, that it is much more common among the laboring classes.

Lithotomy is the operation almost universally performed in this country, preference being given to the lateral method. Crushing is comparatively seldom resorted to. For this, two reasons may be assigned. 1st. The vast majority of cases occur in persons under twenty years of age, and it has been satisfactorily demonstrated that the knife is more successful at this period of life. 2d. The pioneer, and most successful operator for stone in this country, Prof. Benj. W. Dudley, of Lexington, Ky. (now over ninety years of age), invariably cut for the stone, and although his successors have abandoned the gorget, which did such good service in his skilful hands, they have not substituted the lithotrite. Nevertheless, the opinion is rapidly gaining ground, based upon results in England, that crushing is the less dangerous operation in patients beyond middle life.

The case which came under observation was the son of a physician living in Holmes County, Mississippi, aged ten years, physical development spare, but general health very good. All the symptoms of stone had existed for nearly two years, and upon introducing a sound the characteristic click was readily elicited. The only preparatory treatment deemed necessary was a dose of cathartic medicine, which having had the desired effect, the lateral operation was performed the following day, Drs. Tackett (of Miss.), Souchon, and Cullen assisting. The stone was uric acid, and weighed only about ninety grains. The operation was followed immediately by considerable haemorrhage, which was promptly arrested, however, by pressure and pellets of ice. The patient commenced passing urine by the natural passage in less than forty-eight hours, and was so nearly well on the seventh day that he was allowed to return home.

SPERMATORRHOEA.

As usual, quite a large number of cases of this misery-making complaint have applied for relief, but not one in the presence of the class. The shame which such patients almost universally exhibit is of no little value in a pathognomonic point of view.

There is scarcely a doubt—in my own mind at least—that the complaint has its seat in the moral nature, and is seldom productive of local organic changes, except those which arise from excessive secretion, such as atrophy of the testicle. The treatment should therefore be directed not to a fancied irritation in the prostatic urethra, but to the correction of the morbid sentiments and imagination of the individual.

An occasional emission occurring in an otherwise healthy individual under the influence of a lascivious dream—to which even the most virtuous are more or less liable—is strictly physiological, and any attempt to prevent it is as unwise as to endeavor to prevent the return of menstruation in females. Marriage is the only legitimate treatment and is usually effective in both instances.

So also the emission produced by the filthy vice of masturbation, is in itself physiological—that is to say, it is the natural response to the genital excitement, although the latter has been produced in an unnatural way. But a secretion, which is purely

physiological, may become morbidly abundant by frequent repetition of the exciting cause, and the over-taxed organs by which it is furnished may fall into a state of atrophy, which may be considered pathological.

But the precise line between what is physiological and what is pathological, is here, as in many other instances, difficult to define. An involuntary emission occurring once in ten days or two weeks might be strictly physiological in a strong, vigorous, highly animalized individual, but in one of an opposite temperament it would deserve to be considered as the result of a morbid state of the nervous system.

Extreme cases, in which the seminal fluid escapes without any erection of the penis, whenever the patient goes to stool, and without any special sensation, pleasurable or otherwise, are frequently described in books, but seldom occur in practice. It is true that patients often make such statements themselves, and honestly believe them, but upon a strict surveillance, such as requiring the patient to go to stool in an adjacent room, and providing him with a suitable vessel to catch the seminal discharge, it will be found that such instances are rare.

Treatment.—The seat of the difficulty in so-called spermatorrhœa being the brain, efforts at amelioration must be directed to the latter organ. One of the first things to be done is to persuade or assure the patient that his case is entirely curable; that he is not impotent as he imagines; and that involuntary emissions are not evidence of a loss of vitality, but, in many instances, result from a super-abundance of animal life.

2d. The next, and a very long step towards relief, is a strict watch and control over the “thoughts and imaginations of the heart.” This is not to be gained at once, but only after persistent efforts, and may be much aided by suitable mental occupation, avoidance of stimulants and other means of dissipation, regular habits, the society of ladies, etc., etc.

3d. The administration of such remedies as are known to exert a calmative influence upon the venereal desires. Of these only two have proved of any avail in my hands, namely—the bromide of ammonium and the bromide of potassium. Either of these may be employed in doses of a drachm, dissolved in half an ounce of camphor water, on going to bed.

4th. Applications to the prostatic portion of the urethra are sometimes of very great service, but I am almost quite convinced that their effect is wholly moral. The simple introduction of a large sized bougie or catheter, a No. 10 or 12, will be often followed by marked improvement, especially if the surgeon is successful in impressing its great remediable value upon the mind of the patient. If this operation has been already performed without any good effect, the *porte-caustique* or, what is still better, the catheter syringe containing a weak solution of nitrate of silver, may be resorted to, the precaution being taken to obtain the confidence of the patient in the result. Either of these means may be repeated in the course of a few days if the patient's faith has not been too much shaken.

5th. But after all, the grand remedy for this distressing complaint is matrimony ; and in an experience of more than twenty years, I have yet to see a case that has not been entirely cured when the remedy was applied. The great difficulty is to persuade the unfortunate sufferer of his ability to perform marital duties. He is like a youth upon the brink of a stream in which his fellows are swimming and disporting themselves, and calling to him to leap in and show himself a man. He hears the challenge, he feels the reproach, and he sees the ease with which the necessary movements are performed ; but distrustful of himself he shrinks back and hesitates to make the venture. As in this case, so in the other, has it often seemed to me that if some one could but come unawares behind the trembling doubter and push him in, he might flounder for awhile and make many ineffectual attempts, but with proper encouragement he would ere long, and suddenly as though by magic, obtain the requisite self-control and all difficulty at once disappear.

HEMORRHOIDS.

Notwithstanding the broad pathological distinction between the two varieties of piles, the internal and the external, and the essential difference in their established treatment, it is not a little remarkable how frequently general practitioners get the two confounded. Probably the difficulty arises in most cases from failure to make an examination. There is a natural repugnance upon the part of all persons to make an exposure of the

anal outlet, especially when in a diseased condition, and consequently not very clean ; and on the other hand, there seems to be an equally involuntary aversion on the part of the practitioner to demand a view of this part of the body, and to avail himself of the privilege of using his finger when the opportunity is afforded. The absolute importance, of making such an examination *in all cases of anal disease* cannot be too strongly insisted upon, when it is borne in mind, that in the first place, nine-tenths of all the troubles about the anus are denominated, by unprofessional people, piles ; and, in the second, that both varieties of pile are susceptible of radical cure, but by very diverse operations. Opportunities for studying these two forms, and for distinguishing them from other diseases as well as from each other, have presented themselves during the past season. The following leading facts were pointed out :

Internal Hemorrhoids, commonly called “bleeding piles,” have their seat above the sphincter in the sub-mucous areolar tissue, and, unless when very large, show themselves externally only during and immediately after efforts at stool. They vary in size from that of a small marble to that of a pullet’s egg ; in number from one to half a dozen ; present a smooth, glossy, purple hue ; are very elastic to the touch ; are generally of rather slow growth ; and unless ulcerated or inflamed possess but little sensibility. They usually retire within the anal orifice soon after the efforts by which they were forced out have ceased ; or they can always be readily reduced by gentle pressure, except when thickened and indurated by protracted protrusion. In structure they consist of a congeries of dilated and tortuous capillaries, in some cases the arterial and in others the venous, predominating. Their anatomy is therefore almost precisely that of nevus or aneurism by anastomosis, and like the latter, they are liable to large haemorrhages whenever their thin covering of mucous membrane is even slightly broken. Usually the bleedings are small, but recur at nearly every evacuation of the bowels, and thus act as a constant drain upon the system, which is sometimes followed by most serious constitutional disturbance. A marked instance of this kind presented itself during the season, in the case of a man from the country, who came to

the city for advice in regard to a supposed chronic dysentery. He was a miserable object to behold. He had evidently once been fleshy, but now he was greatly emaciated, his sallow skin fell in folds about his neck and abdomen, his muscles were soft and flabby, his face was covered with wrinkles, and his features expressive of protracted suffering and debility. In addition, he was as nervous as a hysterical woman, and would cry upon the least provocation, sometimes without any at all. He said that he had always preserved a pretty good appetite, but that nothing seemed to agree with him; that his stomach and bowels were nearly always full of gas; that he had frequent calls to stool both day and night; that his evacuations were sometimes watery and other times mucous, and that he almost invariably passed a little pure blood which coagulated in the vessel. The latter symptom arrested attention, and upon turning the patient up and requiring him to strain, three large hemorrhoids showed themselves at the anal orifice. Farther questioning led to the opinion that all the dyspeptic and dysenteric symptoms, the emaciation, palpitation, debility, and nervousness arose from the daily loss of blood, which had been going on for more than two years. At any rate, there was no hope of benefit from other treatment until this drain could be arrested. He was, therefore, operated upon, the ligature being applied to two of the three tumors, and although he suffered much tenesmus and pain for a few days, he finally made a good recovery and in less than four months had regained his former robust health.

There is no operation in surgery better established than that for internal haemorrhoids. The ligature is, and has been for many years, almost universally employed; and as its success is unrivalled in the whole domain of surgery, there is not the slightest necessity or propriety for resorting to any other method. The écraseur, nitric acid, the clamp and other means have been recommended, and their authors may have obtained thereby a little ephemeral notoriety, but the ligature, as it has been used from time immemorial, still holds its supremacy, and as in its results there is scarcely anything more to be desired, it is likely to maintain its position in all time to come. In my own experience I have never known it to fail. For using it, only a few directions are necessary.

1st. If the bowels are disposed to be constipated, a dose of cathartic medicine should be given the evening before the operation. Otherwise it is necessary to give only an enema a few moments before.

2d. It is not necessary to ligate more than two thirds of the tumors that present themselves, as the subsequent inflammation will obliterate the remainder.

3d. Great care should be taken not to include any portion of the adjacent skin, otherwise great suffering will follow.

4th. The tumors may be drawn out by means of a tenaculum, double hook, or dressing forceps; the ligature should be pressed down upon the base of the swelling, tied as tightly as can be drawn, and then either cut off short or left hanging from the anus. The tumors should then be returned.

5th. An opiate may be given to allay pain or nervousness, but there is no necessity for confining the bowels for six or eight days, as is often recommended. Patients are sometimes much alarmed a week or ten day after the operation to find, upon straining, that the protrusion is as great as it was before. The tumor thus brought down is, however, not a pile, but the mass of plastic lymph which has been deposited in the sub-mucous areolar tissue in consequence of the irritation produced by the ligature. It usually disappears in the course of a week or two.

External Hemorrhoids, or “blind piles,” are situated immediately at the margin of the anus, just where the skin and mucous membrane are blended; are generally produced in a few hours; vary in size from that of a pea to that of a large marble; are usually spherical, of a dark purple color, sensitive, and when first formed. impart a sense of fluctuation to the fingers. They are formed by the rupture of one or more of the external haemorrhoidal veins, and consist therefore of venous blood, contained in a cavity, which it has made by pressure, in the subcutaneous areolar tissue, the cavity communicating, of course, with the ruptured vein. In the course of forty-eight or seventy-two hours, if the blood has not been repeatedly pressed out by the patient or some one else—as can be frequently done—it coagulates, and the tumor is thus rendered firm. If allowed to remain, the watery and colored parts of the blood become gradually removed by absorption, but

although the tumor may, after days or weeks of suffering, be very much reduced in size, it never entirely disappears, but remains in the form of a little teat-like appendage to annoy the patient for a long time afterward.

The treatment is simple enough. Wait until the blood coagulates, using in the meantime ice to the parts to allay the pain, and then with a bistoury or thumb-lancet, lay the tumor freely open and turn out the clot of blood. Generally this is all that is required, but if, as sometimes occur, there should be a little haemorrhage from the opening in the vein, apply a small compress for twenty-four hours. Occasionally, but very seldom indeed, the haemorrhage is more troublesome, but a twisted suture will put an effectual stop to it.

VESICO-VAGINAL FISTULA.

Two cases of this distressing malady came under observation during the course, both in young married women, and the result of protracted labor, in which instruments were finally used to effect delivery.

1st. In the first case the loss of substance included the posterior half of the urethra, the neck of the bladder, and the adjacent part of the vesical trigone to the extent of half an inch antero-posteriorly and about an inch and a half transversely. Although in this variety the abnormal opening is very accessible to the surgeon, yet, owing to the parts involved, it is one of the most unfortunate that can occur, as it becomes necessary in operating to construct a new urethra and bladder-neck, which being devoid of a true sphincter can never be as serviceable as the original.

The nature of the difficulty was explained to the woman and her husband, and as no assurance could be made as to the time required to close the opening, and no positive promise that there would be entire restoration of control of the bladder, they concluded to return to their home in Alabama without having anything done.

2d. In the other case, the opening was an oblique slit across the neck of the bladder, and extending into the trigone on the right side to the distance of nearly or quite an inch. The whole thickness of the neck of the bladder was divided, but fortunately

there had been no great loss of substance in this situation, although the trigone had suffered considerably upon the right, so that here it was difficult to get the edges in apposition.

The usual operation was performed, five silver sutures and Bozeman's button being employed, but owing to the circumstance last mentioned, there was considerable strain upon the two sutures on the right, and fear was expressed that they might cut out. However, the sutures were fastened, the patient put to bed, a self-retaining catheter introduced, and opium prescribed for keeping the bowels quiet. Everything progressed well for about sixty hours, when the urine began to make its appearance at the vulva, indicating that the sutures had given way. The following day two-thirds of the urine escaped in this way, and by carefully introducing the finger into the vagina the sutures on the right were found quite loose, and the water evidently coming out at that point. As this part of the fistula was situated close behind the pubic bone in a sort of corner or angle, and the sutures elsewhere seemed to be firm, there was some hope that, notwithstanding the leaking, closure might be effected at this point by granulation, especially as the paring just here had been quite extensive. Everything was therefore left in place, and the treatment continued as though no accident had occurred. In two or three days there was a decided increase in the proportion of water passed by the catheter, and in less than a week no escape could be detected at the vulva.

On the twelfth day the sutures were simply cut and the button removed; complete union had occurred throughout the whole extent of the fistula, except in the right corner. Here the parts were granulating healthily, and a very small quantity of urine appeared to distil from the crevice. The patient was again placed upon her back, the catheter reintroduced, the bowels still kept confined by opium, and a vaginal injection of a weak solution of carbolic acid given twice a day. In four days more another examination was made, the silver wires which had been left hanging in place were withdrawn, and not a drop of urine could be discerned upon the completely cicatrized surface. The bowels were now moved for the first time in sixteen days by means of purgative enemata, and the catheter ordered to be

worn at night, but left out for a few hours consecutively in the day. In a very short time the patient was enabled to control the evacuation of urine, when the catheter was left out entirely and she returned home rejoicing.

In performing this operation, I was assisted by Dr. E. Souchon, who successfully applied his apparatus for keeping Sims' speculum in place. This apparatus is a sort of crane, and consists of a narrow vertical upright about eighteen inches in height terminated above by a horizontal arm six or eight inches long, along both of which button-headed tacks are freely distributed. The vertical piece is provided with a thumb-screw at its lower end, by which it may be fastened to the edge of the operating table. In using it, the patient is first placed in the semi-prone position upon the table, when the crane is secured to the latter opposite the middle of the sacrum. The speculum is then introduced, and a gum-elastic ring is slipped over its free extremity; this is sufficiently stretched to keep the instrument elevated, and then hooked over one of the buttons. It is not often necessary to use the horizontal arm of the crane, the vertical one usually sufficing.

Another great advantage of this instrument, besides retaining the speculum, is that it furnishes a most ready means of suspending the sutures as they are successively introduced, and thus preventing their tangling. By this means an assistant can be dispensed with, and even when one is present, which is always desirable, it is of very great service. Its simplicity and effectiveness commend it to all operators.

VESICAL OR URINARY STAMMERING IN A FEMALE, WITH RETENTION OF URINE; CURED BY OPERATION.

In an article entitled "Stammering in other Organs besides the Tongue," Mr. Paget, in a recent number of the British Medical Journal*, calls attention to a not unfrequent difficulty, whose essential nature consists in a want of harmony between the ejaculatory or extrusor muscle of the bladder and the sphincter muscle of the same. He describes it as occurring only in the male, and as manifesting itself ordinarily in an inability to empty the bladder, except under very peculiar circumstances,

* The article referred to is copied into the New Orleans Medical Journal for January 1869.

often of a moral character, in which alone the patient has found by experience that the sphincter of the organ will yield to the contraction of the muscular coat. This condition has been long familiar to surgeons, but no one has heretofore conferred upon it a definite name, hence its non-appearance in systematic treatises. But now that it is publicly and satisfactorily christened, it will doubtless attract more attention. Indeed, I have been only awaiting such an introduction to present the following account of a case, which, it will be seen, does not belong to the Clinical Memoranda of the past season, and has been heretofore kept out of print simply for want of a name.

At one time I called the affection Urethrismus, in consequence of some points of likeness which it presented to that condition of the vagina denominated by Dr. Marion Sims, Vaginismus, but this did not satisfy me wholly. Again, I called it paresis of the bladder, but as the defective power in the muscular coat was not positive but only relative, this name was rejected. I submitted the question once to my distinguished friend and former preceptor, Prof. S. D. Gross, M. D., but he denied the individuality of the affection, and expressed the opinion that the case was one of hysterical retention. I also submitted it to the New Orleans Medical Association, but did not obtain the assistance that I required. Whether I have done right in claiming for it a place under Mr. Paget's denomination, I must leave others to judge. The principal object I have in view in bringing it forward is to illustrate the difficulties which are not unfrequently encountered in making a correct diagnosis.

History.—The patient was an unmarried lady, aged 18, sent to me from an adjoining State by her family physician, with the following history:

"I saw Miss G. for the first time in October, 1861. She was then laboring under fever, pain in the region of the left kidney extending down the corresponding thigh, great irritability of the bladder, and sympathetic disturbance of the digestive organs. I was told that two months previously she had received an injury of the back by the upsetting of a carriage, and had the symptoms just enumerated, but was soon relieved of all except the vesical irritability. The case was regarded as one of inflammation of the

left kidney with sympathetic disturbance of the bladder. The urine was very variable as to quantity and quality, but was generally loaded with mucus, very offensive and acid. With the decline of the fever there was no improvement in the condition of the bladder, which continued irritable without the power of emptying itself, the constant use of the catheter being required. This state of things continued until the following April, about five months, when, under the use of tonics, antispasmodics, cold bath, etc., her general health improved, and she was able to urinate without the use of the catheter.

"From this time until November, 1865, a period of more than three years she enjoyed tolerable good health, complaining, however, more or less, at different times, of pain in the left side and thigh, and uneasiness in the region of the bladder and difficulty in urinating. About the time last mentioned she again lost the power to micturate, and as I failed to afford her any relief after a few weeks trial, I sent her to New Orleans.

"During all my acquaintance with the patient her menstruation has been regular and healthy. She has frequently suffered from intermittent fever, rheumatic pains, and croupy colds; and in view of her strong family tendency to rheumatism I have been inclined to believe that her urinary troubles arose from this source. The urethra has all along been tender, and the introduction of the catheter was frequently attended with great suffering."

Miss G. came under my care in December, 1865. Her general health was much impaired by protracted suffering and frequent attacks of intermittent fever; and in consequence of weakness and pain in her left hip and thigh, she was unable to walk. She was of a sanguineo-nervous temperament but had become accustomed to confinement, and manifested no great desire to leave her couch. The urethra was sensitive, and the introduction of the catheter attended with considerable pain. The urine generally presented a healthy appearance, but was sometimes mixed with mucus, and when allowed to accumulate in the bladder to the amount of more than eight or ten ounces, produced great distress. Judging from the stream of water as it flowed from the catheter the expulsive power of the bladder seemed to be somewhat diminished, but, as may be well understood, this was a

very difficult point to determine. As the secretion of urine was not very abundant, the use of the catheter three times a day sufficed to keep her comfortable; and it may be well to mention that she had never employed the instrument herself and persistently refused to learn how to introduce it.

The determining cause of the retention not being apparent, but suspecting it to be hysterical, I directed my efforts immediately to the improvement of her general condition, and by means of tonics and generous diet soon succeeded in building up her strength. In the meantime, I gently cauterized the urethra from time to time, and applied extract of belladonna to the vaginal surface of the canal, with the effect of diminishing the sensitiveness of the lining membrane, but without producing any impression upon the real trouble. I now made a thorough exploration of the interior of the bladder, but discovered nothing beyond an unnatural degree of sensitiveness of the anterior wall. Suspecting that there might possibly be a circumscribed chronic inflammation of the organ in this locality, I injected a solution of nitrate of silver, ten and twenty grains to the ounce of water, directing the syringe toward the anterior wall. This was repeated several times, gave rise to no great suffering, but accomplished no appreciable good.

Having now thoroughly satisfied myself that no organic disease existed, I recurred to my original impression, that the case was one of hysteria, and treated it accordingly, but except that now and then during defecation there would be a sudden flow and an equally sudden stoppage of the urine, no improvement followed. At the end of five weeks she returned home, her general health almost entirely restored, but still obliged to have the catheter introduced three times a day.

After the lapse of three months, say in April, 1866, she came to me again, her general health broken as before, and the local affection wholly unchanged. I put her upon bark and iron, ordered a liberal diet, and she again rapidly improved. I now watched her more closely than ever, interrogated her in regard to every influence, moral and physical, that could by possibility give rise to the state of things that existed, but utterly failed to obtain the slightest clue. I tried systematically to make a diag-

nosis by exclusion ; summoned the several affections in the long catalogue of known causes of retention and brought them one by one to trial, but with no better success. I called in the aid of my distinguished colleague, Professor Stone, whose skill in diagnosis is not exceeded by that of any one I ever knew, but although he fully appreciated the existing condition, he could not discover any satisfactory cause.

As the case now stood the whole difficulty seemed to consist in a want of proper balance between the sphincter and the muscular coat of the bladder. Whether there was an excessive development of power in the sphincter, or a diminution in that of the muscular tunic, I could not positively determine, but it was quite evident that the organ could empty itself thoroughly if the excessive contraction of the sphincter was overcome. To this end, therefore, I addressed my efforts, and began by dilating the urethra by means of graduated bougies. This was continued only a few days, when, in consequence of the apparent suffering of the patient and the resistance which she made, I was compelled to desist. But one other resource presented itself, which was to incise the urethra including the neck of the bladder. This I resolved upon at once, and the next day, the patient being under the influence of chloroform, I introduced a grooved director, and with a probe-pointed bistoury divided the whole thickness of the upper or anterior wall of the urethra from the neck of the bladder to the external meatus. A large-sized catheter was then introduced, and worn for three or four days, when the patient found, to her great joy, that she could empty her bladder without the instrument, and therefore laid it aside. At first considerable effort was required and the urine flowed off slowly, but there was an evident improvement day by day. Unfortunately, in less than a week from the time of the operation, she was seized with an atrocious intermittent fever, which resisted treatment for not less than twenty or twenty-five days, when, upon being removed to her home, she recovered quite rapidly. During this time she continued to urinate, although with some effort, but with the subsidence of the fever, the bladder recovered its tone and no farther difficulty was experienced. It has now been nearly three years since the performance of the operation, and up to last accounts, only a few months since, there had been no relapse.

Remarks.—What was the nature of this case originally I am unable to determine, but from the history it seems probable that it was a peri nephritis, which, although not a common affection, and, so far as I am aware, not mentioned in systematic works on medicine, is occasionally met with in practice—a case being at the present time under my advice. However this may be, there evidently existed at a subsequent period, an irritability of the neck of the bladder with spasmodic contraction of the same. This continuing for some time seems to have resulted in an unnatural development, a slight hypertrophy, of the sphincter muscle. The irritability having passed off the neck of the bladder was left in this condition, while on the other hand, the organ having been for some time daily emptied by means of a catheter had lost somewhat of its normal tonicity. The muscular tunic was therefore unable to overcome the increased power of the sphincter, except occasionally, when the latter was off its guard, as during defecation, it would admit the passage of a stream of urine for an instant or more. Such at least was my reasoning and conclusion in the matter, and the result of the operation in a measure confirms the diagnosis.

Clinical Memoranda of Cases treated in the presence of the Medical Class of the University of Louisiana, during the Lecture Term of 1868 and 1869. By S. M. BEMISS, M. D., Professor Theory and Practice of Medicine, University of Louisiana.

Cancer of Stomach—Death—Autopsy.—Philippe A. L., aged sixty-two years, entered ward 21, Charity Hospital, October 15th, 1868. The patient was very much emaciated, and so feeble that it was necessary to carry him to the ward. His skin was of a dirty sallow color, dry and furfuraceous. A number of large irregularly shaped white blotches were observed on the front of the chest, which, he alleged had been produced by sinapisms and blisters.

The chief source of complaint on the part of the patient was inability to retain food or drinks. The vomiting occurred immediately after swallowing any ingesta, and was so constant a

symptom that the patient frequently declined to take his food lest it might be provoked. There was some tenderness upon pressure over the epigastrium; greatest about two inches to the left of the mesial line, slightly above the level of the umbilicus, where a small firm tumor could be felt.

Pressing the tumor back towards the vertebral column caused it to pulsate, but it had no aneurismal thrill, neither did it become smaller upon pressure and expand when it was removed. The bowels were sluggish in action and the patient somewhat anxious for permission to resort to purgatives, as had been his habit previous to admission.

The patient referred his disease to an injury received about five months before, from a fall on the pavement, by which the abdomen was severely contused. He had no knowledge of any cases of cancer or other hereditary disease in his family. His habits were regular; habitually drank wine, but never excessively.

The matters vomited consisted of the ingesta and very frequently of blood, in variable quantities. Generally it seemed to have oozed from very minute vascular orifices and presented the gross appearances of "black vomit." Once or twice, however, the quantity was considerable and the normal color but little changed. Frequent and careful microscopical examinations failed to disclose cancer cells. The diagnosis announced was cancer of the great curvature of the stomach.

The treatment consisted of five grains of sub-nitr. bismuth, with one-sixth of a grain of morphia, repeated sufficiently often to keep the patient all the time slightly under the influence of an opiate. Enemata of beef-tea were ordered as an additional means of nutrition.

On the night of October 30th the patient was attacked with diarrhoea, and death ensued about noon of the 31st.

Post-mortem showed cancer involving right end of the stomach and terminating abruptly at the pyloric extremity. A portion of the tumor nearest the pylorus was fungous, and contained imbedded, a clot, probably denoting the point of escape of a very free haemorrhage, which occurred a few days prior to death.

The principal point of interest to students in connection with

this case, is the error of diagnosis, as to locality of the cancer. This was occasioned partly because of the localization of the tumor as far to the left of the mesial line, and somewhat above the umbilicus, but chiefly by the fact that vomiting occurred *immediately* upon swallowing any *ingesta*; and also by the fact that no gastric dilatation could be discovered.

Disease of Pylorus.—John Cromer, aged forty-two, married, by occupation a steamboat watchman, was admitted to ward 21, bed 311, on the 2d of January. He stated that for the past three or four years he had been suffering with his present symptoms of dyspepsia; previously to that time his health had been good. His habits were temperate, in the sense in which he employed the term, meaning thereby that he never drank to intoxication, although habitually taking several drinks of neat whisky per diem. Lately he had abandoned the use of strong liquor because it aggravated his symptoms.

The patient was a sallow looking person, somewhat emaciated, with that sharp discontented expression of the face so often connected with incompetent digestion. He was constantly regurgitating a clear, frothy and slightly acid fluid; the amount of this secretion which he ejected some times equalled one-half gallon a day. He complained of gastric "spasms" occurring at irregular intervals, and occasioning severe pain. He complained likewise of abnormal sensations in the fingers and hands. These sensations he described as tingling or creeping, and sometimes aching pain. There was no loss of motor power. He had anorexia, and about once daily he vomited very abundantly, throwing up large quantities of gastric secretions with whatever *ingesta* he had taken shortly previous to the fit of vomiting. Careful microscopical examinations of the fluids vomited justified the exclusion of sarcinæ, and afforded no evidences of cancerous or other form of ulceration. The ingestion of food produced no pain, except as it gave rise to the spasms which were more liable to distress him after eating. His bowels were inactive, but responded readily to cathartic medicines. Urinary secretion normal.

Upon laying the patient upon his back with the abdomen bare, a very decided enlargement of the stomach was readily deter-

mined. If the stomach was distended by solid or gaseous contents, the altered contour of the abdomen was sufficient to establish the fact of its enlargement. If it was collapsed palpation and succession still afforded sufficient proofs; the plashing sounds from succession could at times be heard, in great part of the hospital lecture room. While being examined in this manner the nature and cause of the "spasms or cramps," as he variously expressed it, were clearly manifested. They were merely painful states attending the normal, though exaggerated, peristaltic movements of the gastric walls. These wavy movements were distinctly and beautifully marked as they passed from left to right across the epigastrium. One inch to the right of the mesial line and just below the umbilicus, a rounded and smooth tumefaction or thickening of tissues could be detected. Its position, however, was frequently shifted; sometimes higher, at others lower, and once it was discovered fully as much as an inch to the left of the mesial line. The variability of position was found to depend upon variable conditions of the stomach as it respected emptiness or repletion.

This tumor I decided to be the enlarged pylorus, and the diagnosis announced, was chronic inflammation of the pylorus with thickening of its walls from fibrinous infiltration. As a necessary consequence of the pyloric narrowing and obstruction, dilatation of the stomach had occurred; not in this instance simply passive, but hypertrophy co-existing with the dilatation. This accounts for so much exaggeration of the usual vermicular movements of the stomach as to render them visible through the abdominal walls, and in part likewise accounts for the pain they occasioned. This latter feature in the case, must, however, be referred to altered function of the nerves supplying the stomach. There is no observation more familiar to the physician than the influence which inflammation or deranged nutrition may exert to set up pain in nerves usually insensitive. Some change of this sort may be supposed to have occurred in Cromer's case, giving rise to what some author terms "the most unbearable of all pain;"—that which arises from the acquired hyperesthesia of organs whose functions are usually performed without consciousness.

The Class may remember that the principal points adduced in support of the diagnosis announced in this case, were, that pyrosis, so prominent a symptom here, was exceptionally present in cancer; that the tumor lacked the nodulated, irregular and hard feel of cancer; that the affected parts had not lost mobility in any degree; that the course of the disease was too chronic and stationary, as to progress, for cancer. It must be admitted, however, that there is a possibility that the pyloric obstruction may have arisen from causes other than either chronic inflammation or cancer.

The prognosis announced, was an unfavorable one as to recovery, but not so as it respects speedy death. According to the testimony of Brinton and others, this form of disease runs a very slow course, the patient sometimes being for a number of years without observable aggravation.

The remedies directed were for the relief of the pyrosis and the paroxysms of pain, and the maintainence of requisite nutrition. Bismuth and alkalies were the chief reliance. He took with great comfort for some time a powder three or four times in twenty four hours, composed of sub. nitr. bismuth, grains $\frac{1}{2}$; acetate morphia, gr. one-tenth; pul. rhubarb gr. i. To try the effect of a gentle mercurial course, the prescription was varied to a pill three or four times daily, composed of rhubarb, gr. i; blue-mass, gr. i.; bismuth, grs. ij.; acetate morphia, gr. one-tenth. He thought himself benefitted also by powders of five grains each of bi-carb soda and powdered charcoal. Small doses of quinine and strychnia were given for their tonic effect. For diet he was ordered milk, soft boiled eggs, soups and jellies. He left the hospital about the middle of January more comfortable than at period of admission.

Chronic Dysentery—Death—Abscesses found in Liver.—John S., aged thirty-three years, a seaman, born in Ohio; was admitted to ward 18, bed 268 (afterwards 265) on the 28th of Oct.

The patient stated that his health was always good until the recent war: during this period he was serving in a Confederate regiment stationed at Richmond and while there he contracted syphilis. The primary sore was followed by cutaneous eruption,

periosteal pain and nodes. He was treated with calomel, iod. potas. and syrup sarsaparilla. In the summer of 1864 he suffered from diarrhoea which reduced his strength so greatly that he was transferred to hospital service. From that period to the date of his admission he was, for the greater part of the time, the subject of disordered bowels.

At time of admission was a good deal emaciated, but able to walk from his bed to the stove and sit in a chair. His skin was generally dry, but as his case was complicated with intermittent fever, the paroxysms would terminate as usual in that disease, with sweats. His tongue was dry and red at tip, covered with a light-brown fur towards base. The alvine evacuations varied in number from five to fifteen or more in twenty-four hours, and were thin and watery with flakes of mucus, and occasionally pus and blood. The urine was scanty and passed with some difficulty, but was not abnormal in constitution. The patient complained of soreness over the abdomen and pain in the back and arms. His appetite was poor; having no desire for anything except articles of decided taste, either salt or sour; such as ham, lemonade, etc. His pulse was ninety-six; temperature normal; thoracic organs healthy; respirations twenty-four; liver and spleen normal in size; no symptoms present to indicate that either was diseased.

Ordered sub-nitrate bismuth, ʒij; pulv. opium, grs. ij; in six powders. One at every loose stool. Quinine in sol., grs. xv.; in two doses. October, 29, continue bismuth and opium—drink of citric acid, ʒj; syrup. lemon, ʒj; infusion flax seed, one pint. October 31st. Bismuth, ʒii; tannin, ʒij; opium, grs. iv. Nine. powders; one thrice daily.

Nov. 2.—Nitrate silver grs. iv; pul. opium, ext. hyoscyamus, aa grs. xii; pulv. ipecac, grs. v; twelve pills; one thrice daily; ten grains Dover's powders at night.

Nov. 3.—Ext. hæmatoxylin ʒij; tinct. catechu, tinct. opium, aa ʒss; cinnamon water, ʒj; teaspoonful every two to four hours. Barley water for a drink.

I think it unnecessary to occupy space which might be more valuably appropriated, by copying any more of the prescriptions made for this patient. Those copied afford a good idea of the

general plan of treatment pursued. To gratify his constant desire for acids he was several times supplied with a drink made by adding a tablespoonful of the following mixture to a tumbler of water: Aromatic tincture sulphuric acid, 3ij; syrup ginger, 3j; water, Oj; mix. Occasionally in lieu of this, the following was ordered as a drink: Pulv. gum-arabic, 3j; syrup lemon, 3j; water, Oj. Opium suppositories and enemata were resorted to, sulphate copper was used in combination with opium;—so was solution of pernitrate of iron, everything which good nursing and careful preparation of his diet by the Sisters could accomplish, was done, but without any permanent good results.

The patient died on the 9th of December. On examining the body in the anatomical room, Dr. Kelly found the liver the seat of a number of small abscesses. The following is his account of the appearances presented by the liver:

These abscesses, to the number of a dozen or more, were found scattered through the organ and occupying both lobes; the greater number and largest being situated on the convex surface immediately beneath its peritoneal investment, which was unaltered in appearance. Each of these superficial deposits contained from about half an ounce to an ounce of pus. On making sections of the liver in various directions, several smaller abscesses were found, the largest of which did not contain more than a drachm. The pus, though, of course, somewhat changed in appearance by time, had, as well as could be determined, all the characters of healthy pus. No debris of liver tissue could be found in any of the abscesses; the hepatic substance in immediate contact with the purulent dépôts was apparently healthy, and the organ, as a whole, presented nothing abnormal. The gall bladder was moderately distended with healthy looking bile.

This case teaches us how patient and undemonstrative the liver may be under even extensive ravages of disease, and how erroneous those pathological ideas must be, which ascribe so many human ills to mere disorders of the liver.

Sciatica, Recovery—(Clinical Notes by G. W. Foster, M. D.).—CHRIS. BYRNE, Irish-seaman, aged 33, was admitted to ward 12, bed 214, on the 20th of October. The patient's history as an invalid begins

with an attack of syphilis in 1853, and includes a second attack with buboes resulting in suppuration in 1857, and a third attack of venereal sore with gonorrhœa in 1865. In 1867 he shipped from Baltimore for Liverpool with a scant crew and during stormy weather. He was attacked at sea with a pain in the calf of the right leg, which he describes as having been of a "shooting" character, like "thrusting needles in the flesh," and reaching from the calf of the leg to the knee. The pain afterwards extended to the thigh along the course of the sciatic nerve. There was tenderness of the surface on pressure.

On reaching Cork, he was sent to hospital, and remained five weeks under treatment. He does not know what treatment was resorted to, but thinks he took quinine. At the expiration of five week's detention in hospital he was discharged measurably relieved of pain, but it recurred three days after his departure from the hospital.

Three weeks later he was admitted to a hospital in Liverpool to be treated. He remained under treatment four weeks; took quinine and had blisters applied over thigh and hip. He then shipped upon a vessel for America, which was driven by stress of weather into Londonderry, where he again underwent one month's treatment, and was dismissed as cured.

On the 20th August, 1868, he entered the city hospital at New York, and underwent four weeks' treatment for the most part with hypodermic injections containing morphia, and, as he thinks, quinine combined.

He complained at date of admission of severe pain extending along the course of the sciatic nerve, with tenderness on pressure. He thought the pain rather increased by a recumbent posture, and sometimes lessened by gentle exercise. There was very decided loss of motor power in the right leg. The points of introduction of the remedies which had been used subcutaneously were denoted by a number of elevated hard lumps of infiltrated tissue, and also by the scars of small abscesses. The patient was ordered two teaspoonfuls thrice daily of guiaic mixture, $\frac{3}{4}$ iv; iod. potash, 3*i*. On the 23d, ten grains of Dover's powder was given at night. On the 25th, the treatment was changed to a tablespoonful thrice daily, of hydrochlorate of ammonia, $\frac{3}{4}$ iv; pul. acacia, $\frac{3}{4}$ *j*; water, $\frac{3}{4}$ iv. Mix.

This treatment was continued without cessation or change other than is mentioned in this paragraph, until the patient's discharge from hospital on the 25th of November, *apparently*, entirely cured. On the 12th of November, he took 5*ii.* of fluid extract of ergot. This was ordered for the purpose of testing under observation of the Class, the alleged good effects of this medicine in neuralgia. The result of this experiment is negative as to any advantage from its use. The patient took altogether three doses of Dover's powder; the one of ten grains mentioned above and two others of one scruple each subsequently. On November 16th, he received in the presence of the class a hypodermic injection, over the most superficial part of the sciatic, of morphia, one-sixth grain, and atropia, one-fortieth grain. In three minutes the pupils were sensibly dilated; in ten minutes the mouth and throat were dry, and the patient expressed great relief. A similar injection was used on the 19th with similar results.

The Class will find detailed here the treatment in full of a case of sciatic neuralgia. They may think the minuteness of detail unnecessary, but all clinical facts relative to a disease both so common and obstinate are valuable.

In a second case of sciatica treated during the lecture season, the muriate of ammonia treatment failed, and the case improved under iodide potash thrice daily with subcutaneous use of morphia and atropia two or three times weekly. We all know that there are coincident conditions of the system which must be taken into account in the successful treatment of all neuralgias, in whatever nerves situated, but it is not possible to make an abstract formulization of remedies to meet each case. It is, however, reasonable to infer that the muriate of ammonia treatment will be found more apposite in those cases in which some impediment to secretion or excretion leads to blood impurity, or in which the inquination arises from a poison directly introduced, as the syphilitic: cases in which the neuralgia is in truth the "prayer of the nerve for healthy blood."

Asthma and Emphysema.—(*Clinical Notes, by Drs. Dale and Collard.*)—Henry Kuse, a native of Prussia, aged 35 years; by occupation, deck hand on a steamboat, was admitted to ward 18

on the 15th of December. He was afterwards transferred to bed 307, ward 21, because of a bad flue and smoke in ward 18.

The patient's mother suffered with asthma for fourteen years previous to her death, which occurred at the age of fifty. He is the youngest of nine children, and does not know that any of his brothers or sisters have been similarly affected. Nearly fourteen years ago he had tertian ague, the attacks continuing to return for six months. At the end of this period he observed the "slow growth," of a painful "tumor" in the right hypochondriac region. In three months the "tumor", probably a hepatic abscess, opened into the intestinal canal, and he discharged large quantities of pus both by catharsis and emesis. During convalescence from the abscess the first attack of asthma occurred, and since that time he has suffered very many returns. The attacks are generally preceded by catarrhs, and were at first almost confined to cold weather; now the catarrhal bronchitis is chronic, and although the liability is greatly increased in winter, he also suffers during the summer. His appetite and digestion are good; he complains of habitually costive bowels for which he chews rhubarb root. The present attack dates from exposure to inclement weather about the first of November. He has received medical treatment both in St. Louis and in this city but without any advantage.

When admitted, the patient had marked bronchitis, with copious expectoration of muco-pus. The difficulty of respiration was so great that he spent almost the whole time in a sitting position, with the shoulders carried forward. The entire chest was rounded and barrel-shaped. The movements of expansion and contraction of the thorax in respiration were so much diminished that the difference between the circumference of the chest taken during a forced act of expiration and that taken during a forced act of inspiration, was less than three-fourths of an inch.

Percussion yielded a morbidly clear resonance over both sides of the chest, in front and posteriorly. Sibilant and moist râles, in varying degrees, replaced the vesicular murmur in both lungs. Cough difficult and frequent; respirations 37 per minute and shallow; expiration prolonged; patient unable to enunciate even

a short sentence without a break to renew the volume of air necessary for the production of voice.

It is apparent from this summary of the leading features of this case, that the diagnosis might, with propriety, be stated "chronic bronchitis and emphysema with paroxysms of Asthma," but it is presumed that none of the students failed to understand that although the asthmatic attacks chiefly arrested their attention from the dyspnœa and livid countenance they induced, the case owed its persistency and incurability to the emphysema and bronchitis connected with it.

On admission, the assistant house-surgeon prescribed for the patient a mixture containing lobelia inflata. At my first visit I ordered the hypodermic administration of sulph. morphia one-sixth grain, atropia one-fortieth; this failing to produce any desirable effect, or much effect whatever; one-fourth grain of morphia and one-thirtieth of atropia were exhibited subcutaneously the next day. No good results following, this treatment was abandoned. An attempt was then made to subtract the asthmatic element by the joint influence of opiates and sedatives. The following prescriptions were ordered with a view of meeting this indication. Rx Brown Mixture $\frac{3}{4}$ iv.; hydrocyanic acid med. gtt. xv. Pul. Dover, $\frac{3}{4}$ i. Mix. tablespoonful every three to four hours; Rx tinct. hyoscyamus, $\frac{3}{4}$ j.; tinct. opium, $\frac{3}{4}$ j.; acetic acid, $\frac{3}{4}$ j. M. Two teaspoonfuls to half pint of boiling water; the vapor to be inspired for some minutes every night from an inhaling bottle. The results of this practice were unsatisfactory, and it was determined to try the effects of alteratives and resolvents. He was ordered iod. potash, $\frac{3}{4}$ i.; tinct. sanguinaria, Canada, $\frac{3}{4}$ ss. Brown Mixture, $\frac{3}{4}$ iiss. Mix; tablespoonful thrice daily. Then hydrochlorate of ammon, $\frac{3}{4}$ i.; tar water, $\frac{3}{4}$ i.; three times daily. No benefit accrued.

In short, no treatment gave any positive curative results. That which seemed to answer best, was a tablespoonful of the following mixture repeated so often as to produce a little nausea when asthmatic returns were threatened: Rx Tinct. lobelia $\frac{3}{4}$ j.; syrup squills; syrup wild cherry, aa. $\frac{3}{4}$ ss.; Brown Mixture, $\frac{3}{4}$ jj.; then, cod liver oil half ounce three times a day, with occasional fly blisters over the chest.

This case affords a good illustration of the difficulties which surround the treatment of asthma after it has produced emphysema and bronchial dilatation. A state of bronchial irritation leading to increased secretion, is almost inseparable from such conditions, while the loss of tonicity of the air cells and of the muscular fibres of the dilated bronchii renders competent expectoration impracticable. Add then to these almost irremediable changes in pulmonary structure, a state of spasm involving more or less of the bronchial tubes whose muscular integrity remains, and we form some correct idea of the formidable array of complications to be encountered.

Chronic Pneumonia.—(Clinical Notes by P. C. Circuit, M. D.)

✓ John W. O'Neil, sixty-three years of age, a native of Baltimore, seaman, was admitted to charity hospital in February, 1868. About eight weeks before admission, he had an attack of tertian intermittent contracted in the neighborhood of Corpus Christi. He came to this city on a schooner during very inclement weather, and entered the hospital for the treatment of what he regarded as a violent cold. The patient fell under the care of Drs. Bickham and Warren Stone Jr., who recognized the disease as pneumonia involving the right lung. Ten days after admission the sputa became purulent in appearance, occasionally streaked with blood. During the month of March the cough and expectoration gradually abated. He states that previous to their disappearance, he had on several occasions spat up small quantities of florid, frothy blood. Although his health was greatly improved, he remained in the hospital during the summer, not feeling sufficiently recovered to ask for his discharge.

On the 23d of October he was transferred to ward 21, bed 313, to be treated for purpura simplex. Both of his lower extremities, and face and forehead were blotched over with haemorrhagic spots, not effaceable by pressure. This condition was relieved by nitro-mur. acid in combination with vegetable bitters, and by chalybeates.

Upon examination of the chest, the patient presented the following evidences of consolidation of the greater part of the right lung. Supra-clavicular region sunken; flattened chest wall over

whole of right side; deficient expansion during inspiration. The circumference of the whole chest one inch above the nipple $39\frac{1}{2}$ inches. The circumference of the left side 20 inches, after forced expiration $19\frac{1}{2}$ inches; after forced inspiration $20\frac{1}{4}$ inches; the circumference of the right side was hardly changed during respiratory acts. Percussion resonance lowered over whole right chest; in most parts dull, although nowhere producing a flat thigh sound; over the larger bronchi giving tympanitic notes, but no characteristic cracked metal sounds. Loud tubal breathing; voice sounds and vocal fremitus exaggerated; heart sounds audible over right chest; some broncho-vesicular breathing in supra-spinous space. Left lung, compensatory exaggeration of vesicular murmur. The patient had no râles, or bronchial secretion; no cough nor any difficult respiration except after considerable physical effort.

In my opinion this is a clear case of solidified lung from a failure in the process by which the products of inflammation are usually removed in pneumonia. Whether this arrested or imperfect absorption is usually occasioned by the accidental occurrence of the effusion into the interstices between the air cells and bronchioles instead of upon their free surfaces is a point not yet determined.

Niemeyer, in his admirable work on Pathology, says:

"We naturally distinguish three forms of inflammations of the lungs. I. *Croupal pneumonia*," (our common acute pneumonia.) "It represents the same process in the alveoli of the lungs which, in ordinary croup, takes place in the mucous membrane of the larynx. II. *Catarrhal Pneumonia* is closely connected with the processes which we have described as laryngitis, bronchitis catarrhalis, and is accompanied by increased secretion and copious formation of young cells (*pus corpuscles*) without an accompanying coagulating exudation into the alveoli. Both forms of inflammation deposit their exudation on the free surface, without the pulmonary tissue itself being materially disturbed in its nutrition. III. The *third form of pneumonia*, the *interstitial*, depends, on the contrary, on an inflammation which concerns the walls of the alveoli and the connective tissue lying between the lobuli: Inasmuch as the last form, at least in man, is almost

always a chronic disease, it has been designated in opposition to the previous forms, which are as a rule acute, as *Chronic pneumonia.*"—(*Niemeyer's Pulmonary Phthisis.*)

The excellent physicians who first attended this case cannot remember whether or not the patient had rust-colored sputa. The presence of this form of expectoration in decided character and amount, would certainly indicate that the attack was the ordinary acute pneumonia, its absence is equally strong evidence that the exudation is interstitial; but we are not able yet to assert that both alveolar and interstitial exudation may not co-exist.

The state of the patient's system at the period when inflammation invades the lung has, beyond question, great influence upon the character, and perhaps the seat of the products of the inflammation. If pneumonia occurs during the course of some other disease, or in a state of mal-nutrition merely, it is more apt to be irregular in type and become chronic than if it attacks the lung of a previously healthy person.

Whatever may be the pathogenetic cause, the lung tissue becomes solidified by the deposit of a fibroid material, and differs in its ultimate conditions from the ordinary hepatization of pneumonia in the fact that it is drier, firmer, creaking under the knife, and is retracted and shrunken in size. The majority of cases show tendency to softening and destruction of the lung, in others the "cirrhosed" lung as described above may remain for years without change.

During the winter, this patient was for several days affected with cough attended with considerable expectoration of peculiarly glairy tenacious sputa, but I was not able to determine whether the cough and expectoration were from catarrh or from the softening of a limited portion of the diseased lung. No physical evidences of a cavity were found either before or after this event.

This case is interesting because it is rare, and because the diagnosis is so well grounded upon both history and symptoms. Generally, the diagnosis between chronic pneumonia and tubercular phthisis, is impossible, as well as practically unnecessary, since their treatment and results are not essentially different.

The practical utility therefore of teaching students to believe

"that in very many cases there is not a single tubercle in phthisical lungs," or that "the greatest danger for most phthisical patients is that they may become tuberculous," is not that they may attempt at the bed-side the often impossible point of determining whether the solidification is from tubercular or inflammatory deposit, or if the cavity is from softening of one, or the other, but that they may, as practitioners, attach more importance to the presence and results of all inflammatory affections of lung structure. In my teachings, I have not occupied the extreme ground of either of the above quotations, but I do endeavor to impress the students to whom I lecture, with the opinion that the importance of inflammations of the lungs in producing consumption, and in increasing the rapidity of its course, has been overlooked.

Capillary Bronchitis with acute Pleurisy—Recovery. (Reported from Clinical Notes by Drs. Allen, Rather and Farrish.) Auguste M., 23 years of age, a native of Germany, by occupation a sailor; was admitted to ward 21, bed 315, on the 6th of December. A few hours before admission he had been seized suddenly with acute pain in the right side. The pain was stitching in character and was aggravated by acts of respiration. Pleuritic friction was well marked on both sides, but most distinct on the right. Both lungs were filled with large and small bubbling râles. Percussion gave a clear resonance anteriorly and latterly; the patient could not be raised for examination posteriorly. His decubitus was upon the back with the shoulders elevated; his face and lips were livid; respirations shallow, 72 to the minute; expectoration scanty and purulent in appearance; pulse 120; temperature 102°. During the afternoon and night following his admission he took, by direction of the house-attendants, 3ss of quinine in solution, and also several doses of morphia and tartrate of antimony combined—one-eighth grain of the former to one-sixteenth of the latter. The patient was not able to talk long enough to give any history of his case, and no reasons existed for believing malaria present as a complication, except the known fact that it is rarely absent in any form of acute disease among the sailors on our Southern rivers. The quinine was therefore

given merely to test the presence of malaria, or to meet a contingent indication.

Dec. 7th.—About as described yesterday: pulse 120; respirations 72; temperature 103°. Ordered carb. ammonia ʒi, French brandy, water, aa ʒiij. Mix; tablespoonful every hour. Milk-punch every half hour; beef essence every hour; the chest to be enveloped in flannel wrung from hot whisky and water, equal parts.

Treatment continued through the 8th, 9th and 10th with very little change in patient's condition: Expectoration gradually becoming more abundant and facile; bowels moved on 9th. On the 8th, pulse 118; respirations 54; temperature 100°. 9th.—Pulse 108; respirations 48; temperature 100°. 10th.—Pulse 100; respirations 40; temperature 100°.

11th.—Pulse 98; respirations 38; temperature 100°. Ordered quinine, grs. xvi, water ʒi, aromat. sulph. acid q. s. Mix. S. Teaspoonful every two hours; the ammonia to be continued but at intervals of two hours and alternated with the quinine.

12th.—Pulse 94; respirations 30; temperature 99°; expectoration abundant; continue treatment; chest to be rubbed with following liniment: R. Oil turpentine, ʒiij, acetic acid, ʒiij, essence lemon ʒi, yolk of one egg, water ʒiiss; dry flannels applied; soft cooked eggs added to diet.

13th to 19th no especial change; expectoration more than one pint of apparently unmixed pus in twenty-four hours; treatment continued. The following is a tabulated statement of pulse, respirations and temperature for each day, from 13th to 19th inclusive:

Date.	Pulse.	Respirations.	Temperature.
13th	90	30	100
14th	90	30	100
15th	90	30	98.4
16th	94	30	99.3
17th	89	34	100
18th	91	36	98.2
19th	86	32	98.5

On the 17th he was ordered a tablespoonful thrice daily of the following: R. Quinine, grs. xvi.; mur. tinet. of iron, ʒi.; hydrochloric acid, dilute gtt. xx., syrup, ʒi.; water, ʒiij; mix. This

prescription was given for the double purpose of limiting the excessive secretion and of combatting a very strong disposition to hectic, which manifested itself. Treatment otherwise as before.

On the 20th, a liniment of tinct. iod., $\frac{3}{ii}$.; glycerine, $\frac{3}{i}$.; was substituted for the turpentine and acetic acid. This treatment was continued without change until the 29th. Stimulants and diet being administered at stated intervals by day and night.

On the 29th, the ammonia was withdrawn, and the patient took at bed-time Dover's powder, grs. x.; camphor, grs. v. It was found necessary to resume the ammonia on the 30th, but a second powder of Dover's powder, grs. xv.; camphor, grs. v.; was given at night. January 1st.—Same treatment.

On the 2d of January, the patient's respirations had fallen to twenty five per minute; on the next day they were thirty-six; percussion over base of right lung anteriorly and laterally, revealed flatness. There were no breath sounds over the dull portion; voice too much weakened to obtain any results.

On the morning of the 3d, resonance was found over the portion of lung dull on previous day. This observation established the fact that the dullness had been occasioned by collapse of lung. The enormous secretion from the bronchial surfaces had blocked up some of the larger tubes so that a very considerable portion of lung-tissue had become not only impervious to incoming air, but exhausted of its residual portion, so as to yield absolutely flat sounds. A fit of coughing, or some slower process of removal had again opened the affected portion of lung to the ingress of air and normal resonance had been restored. This was the second instance of pulmonary collapse occurring in my wards during the past winter.

On the 3d of January, Mahlon was placed upon the following prescriptions:

R	Sulph. quinine.....	Diss.
	Mur. tinct. iron.....	$\frac{3}{iv}$.
	Hydrochlor. acid, dil.....	$\frac{3}{i}$.
	Water.....	$\frac{3}{iv}$.
	Syrup.....	$\frac{3}{ii}$.

Mix. S. Tablespoonful thrice daily.

R	Hydrochlorate ammon.....	Diss.
	Tar water.....	$\frac{3}{viii}$

Mix. S. Tablespoonful every two hours during the day.

Dover's powder, grs. xv.; camphor, grs. v.; at bed time. On the 8th it was found necessary to omit the muriate of ammonia and return to the carbonate, which seemed throughout the case to exert an excellent effect as a stimulant, and in aiding expectoration perhaps by its chemical influence over pulmonary secretions.

The patient left the hospital on the 2d day of February very rapidly convalescent. This case was one of such interest to the Class as an instance of recovery from an extreme condition, that I have been careful to give a circumstantial account of the symptoms, and the treatment adopted. Every prescription ordered has been copied from the ward prescription books except two fly bisters, one on the 2d and the other on the 7th of January. These were applied at his own request to relieve chest pain. It will be observed that the treatment was heroically stimulant and supporting. It is quite likely that with respect to the prescriptions of quinine and iron, the whole of each prescription was not administered, but this is not true of any of the other remedies, or of the alcoholic stimulants. They were given regularly and faithfully, and I attribute the patient's recovery to the extraordinary attentions he received from the ward students and his nurses. For thirty-five successive days after admission, he took each day, twenty-four ozs. of whisky, besides the brandy with which his ammonia was mixed. After this period the stimulants were gradually reduced, until at the date of his discharge, he was taking only the customary allowance thrice daily.

Before leaving the hospital, the patient informed us that he had been the subject of chronic bronchitis with abundant expectoration from his early youth. The amount expectorated daily, was, according to his estimation, never less than would fill a small tea-cup, but was liable to be greatly increased by catarrhs.

The lessons of most interest to students obtained from this case, are, first, when two maladies attack a patient coincidently, it is proper to address our curative measures to that one which imminently threatens life, even though they may be considered inappropriate for the minor disease. Thus, alcoholic stimulants and carb ammon. were given without stint, to meet the indications presented by the capillary bronchitis, although acute pleu-

ritis and a temperature of 103 also complicated the case. The next lesson is, the length of time during which stimulants in large quantities may be borne under circumstances in which they are clearly indicated. They then become *true remedies*, and their pernicious effects are annulled by contact with the disease, as it is with opium in violent pain.

Capillary Bronchitis and Phthisis—Collapse of Lung.—(*Reported from Notes by Walter Hilliard, M. D.*)—Antone Crote, a Prussian, 47 years of age, by occupation a steamboat fireman; was admitted to ward 18, bed 268, on the 2d of Dec.

There are no hereditary diseases in the family and he has brothers and sisters living and healthy. He has spent the twenty-three years of his life in this country, on steamers plying Southern rivers. With the exception of a severe attack of yellow fever in 1853, he claims to have been entirely healthy until his present attack. He has drank whisky habitually, though but seldom to intoxication; there are no evidences of syphilitic taint.

He attributes his present illness to violent cold brought on by falling asleep in the open air after having been heated by unusual physical exertion. This occurred in Jan. 1868. For the first two months of his illness he had violent cough with scarcely any expectoration: after this the expectoration seems to have been muco-purulent and abundant; and some weeks later he observed the sputa streaked with blood. Subsequently to this the blood would come up almost pure and in sufficient quantity to “run a few inches along the floor.” For the past two or three months the haemorrhages have ceased, except to merely tinge the sputa during attacks of what he calls “fresh cold.” The amount of expectoration continued to be large. His weight is now 178 pounds, when in usual health it is a few pounds over two hundred.

At the moment of the patient’s admission his lips and face were livid; his respirations hurried and shallow and his pulse rapid and feeble. Both lungs were pervaded by mucous râles, and a large portion of the chest area over the middle lobe of the right lung gave flat percussion sounds. The patient’s crippled respiratory function and extreme condition rendered a safe diagnosis impossible, until after the lapse of a few hours, percussion reson-

ance, nearly normal, was found to have been restored to the portion of lung which was flat at time of admission. This sudden change proved beyond doubt that the dullness had proceeded from pulmonary collapse of so great a number of contiguous lobules as to extinguish normal vesicular resonance over fully two-thirds of the middle lobe.

Gairdner asserts, and Fuller testifies to the truth of the statement, that this is a greatly more common event in the clinical progress of bronchitis than is suspected. In the bronchitis of the aged, the young or the feeble, we are prepared to expect its occurrence. These two cases seem to indicate increased liability in adults under circumstances which at the same time lessen the force of the respiratory process and increase the amount of secretion in the bronchial tree, especially in its smaller branches.

Fuller cites the experiments of Mendelsohn and Traube, which show the simplicity of the mechanism of pulmonary collapse in bronchitis. In these experiments the results were equally the same whether they introduced solid substances, as shot, into the bronchial tubes, or whether they injected solutions of gum. The materials used acted as ball valves, preventing the ingress of air, but permitting the expiration of that beyond the points of obstruction, so that the portions of lung they cut off became emptied of air and collapsed.

Crote, for some time prior to admission, and for several weeks after that date, expectorated daily largely over a pint of mucus.

The very imperfect history the patient was able to give at time of admission led to a surmise of malarial complications and he was ordered two scruple doses of quinine at intervals of four hours, and one table-spoonful of the following mixture every second hour: R. Carb. ammonia, $\frac{3}{4}$ i; syrup tolu, $\frac{5}{4}$ j; camphor water, $\frac{3}{4}$ iv. The chest was enveloped with a flannel jacket wrung from hot water and covered with oil silk. The patient was ordered wine-whey, egg-flip, and beef essence for diet. These prescriptions are sufficient to indicate the general plan of treatment pursued at period of admission. Cod liver oil and chalybeates were used in the after-treatment of the case.

The following observations taken for three successive days in January show the patient's condition at that time :

	Temperature.		Pulse.		Respirations.	
	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.
16th	98.6	99	.....	70	.....	22
17th	98.4	99	72	73	20	20
18th	98.5	99.3	70	86	20	20

Thorax, percussion, slight dullness, mammary region right side ; elsewhere normal. Auscultation ; infraclavicular and mammary regions right side, tubular and wavy inspiration ; expiration very greatly prolonged and intensely tubular in quality , sonorous râles below right nipple and in infra-scapular region posteriorly.

Feb. 13th.—Above-stated physical signs still present ; patient has improved in appearance, weighs 180 pounds. Discharged February 22d.

NOTE.—Crote re-entered the hospital, ward 19, shortly after the close of the session, in a very debilitated condition : Had lost fifteen pounds in weight since his discharge ; expectorated muco-pus freely ; auscultation showed same signs as before—percussion, dullness, right mammary region well marked. After remaining in hospital about two weeks, on supporting treatment and best diet. Crote was discharged, at his own request, somewhat recuperated.

C. H. K.

Hæmoptysis—Death.—Jerry McCarthy, Irish, 30 years of age, by occupation a deck hand on a steamboat ; was admitted to ward 18, bed 263, on the 30th of December. Has very limited knowledge of his family, but cannot give any information of hereditary tendency to disease. He has lived in the South since 1853, constantly employed on boats running on the Gulf rivers. In 1856 had a chancre, which was treated and cured without constitutional symptoms, otherwise has had no sickness. One year ago was attacked with “severe cough ;” no hæmoptysis ; character of expectoration not remembered. Since that period has been subject to frequent slight attacks of coughing ; occasionally some blood expectorated, but the quantity does not seem to have been sufficient to have excited uneasiness on the patient's part.

On the 23d of December was seized with a severe chill, succeeded by high fever and attended by profuse hæmoptysis—thinks he expectorated a pint of blood. From this period to the date of his admission he had a slight chill daily, always occurring in the forenoon and followed by febrile exacerbations and sweats. The

haemoptysis did not recur, but his sputa were frequently streaked with blood.

His appearance on day of admission was that of a man of stout build, good habits and former good constitution, but now much emaciated. States that he has lost fifteen pounds weight during the last four months. He had an anemic pallor; pulse 102, thready and feeble; temperature 100°; respirations abnormally frequent; voice hoarse; coughed a good deal; expectoration muco-purulent, occasionally streaked with blood. Percussion gave dull sounds over whole of left chest both anteriorly and posteriorly; respiratory murmur absent, voice sounds distant; exaggerated breath sounds in right lung with wavy inspiration; cardiac impulse displaced to right and near ensiform cartilage. Mensuration showed the *right* side larger by one half inch than the left. One scruple of quinine in solution was ordered to be taken in doses of five grains every fourth hour.

Dec. 31st.—No notable change. Quinine in five-grain doses thrice to-day, cod liver oil half ounce three times. To drink a lemonade made of bi-tartrate potash dissolved in infusion flax seed made palatable by adding lemon juice and sugar. Dover's powder, five grs. at bed-time.

Jan. 1st.—A little improved, pulse 94, temperature 99°, ordered mur. tinct. iron, tinct. digitalis, aa. gtt. xx., repeat thrice daily—repeat the Dover's powder and continue lemonade and cod liver oil. Apply over left lung, lint or cotton, moistened with following lotion:

R.	Bichloride mercury.....	grs. ij.
	Tinct. iodine.....	3iv.
	Glycerine.....	
	Water, aa.....	3ij.
Mix. For Liniment.		

Jan. 4th.—Pulse 84, temperature 98°, patient able to sit up, has more appetite and is cheerful.

Jan. 5th.—Pulse and temperature normal. Heart's impulse nearer normal position. Percussion over apex of left lung gives a little more resonance. Ægophony posteriorly and beneath angle of scapula. The 6th, 7th and 8th showed a little improvement, the patient being able to leave his bed and walk around the ward. Tinct. iron and digitalis omitted, ordered bi-

tartrate potash, $\frac{3}{4}$ j.; infusion juniper berries, Oj.; to be drank in twenty-four hours.

Examinations on the 9th and 10th indicated decided improvement. Percussion resonance had become more clear over the apex of the left lung, and had extended to the second rib. Ægophony still present; sputa nummular, streaked with blood, but small in amount.

On the night of the 10th the patient was suddenly seized with very profuse hæmoptysis and expired almost immediately.

The amount of blood lost could not be computed, as it was thrown over his bed and clothing as well as in his basin. It was, however, so considerable in quantity as to justify a suspicion that loss of blood may have caused death. I think, however, that it is much more reasonable to refer the death to apnœa than to aæmia. In the first place the extreme rapidity with which death followed the commencement of the haemorrhage, is an argument in favor of apnœa. Secondly, the readiness with which the only remaining portion of lung he was able to utilize might have become obstructed with blood, so as to cut off access of air and cause immediate suffocation.

The patient's friends obstinately resisted all importunities for a post-mortem, so that the cause of death and source of the haemorrhage was left undetermined. My diagnosis was phthisis pulmonalis complicated with pleuritic effusion. Some medical person seeing the case, or having heard an account of it after death, suggested aneurism, and death from its rupture. This opinion I discussed in the presence of the Class with my reasons for discarding it. The history of the case, together with the symptoms and signs connected with it give such easy and natural support to the conclusions announced, that it would be poor philosophy to reject them in favor of the harder method of accounting for them by conjecturing an aneurism. Prior to death there were many evidences of the presence of phthisis, none whatever to justify a teacher in mentioning aneurism, except as a possible source of the haemorrhages previously occurring—the mention then being made in common with other possible causes of hæmoptysis by way of establishing a diagnosis by elimination and exclusion.

Malarial Cachexy—Recovery.—Joseph Cooper, aged 12 years, a resident of Madisonville, near the north shore of Lake Pontchartrain, was admitted to ward 21, bed 309, on the 23d of October. Had suffered an attack of some form of "fever" in the spring of 1863, and had remained in poor health from that period to the date of admission. Three weeks before admission was attacked with tertian ague, and soon after had swelling of his feet and legs.

On admission, the patient's aspect was typical of the greatest possible anemia consistent with retention of life. The surface was white and waxy; lips, tongue and conjunctiva bloodless. The feet and ankles were edematous; the face puffed in appearance; abdominal cavity somewhat distended by effusion; the spleen a good deal enlarged and indurated. The heart's action was rapid and feeble; and there was a cardiac murmur synchronous with the first sound and most distinct at the base and along the large arteries, diagnosed as a blood-murmur. Respiratory sounds clear over both lungs; urine without albumen or casts, pale, of Sp. G. 1008.

Prescribed—R. Ferri Ammoniae Sulph.....	Div.
Quininæ Sulph.....	Di.
Acid. Sulph. Aromat.....	3ij.
Aquaæ Cinnam.....	3ij.
S. Teaspoonful thrice daily. Generous diet; porter thrice daily.	

Oct. 28th.—The patient was found to have improved considerably: swelling of feet and legs much diminished; fluid in abdominal cavity almost removed; spleen somewhat smaller; blood murmur still present. Treatment had been changed on 27th to ten grains of potassio-tartrate of iron thrice daily, in half ounce of sherry wine. This prescription was continued for the greater portion of the time intervening between its first employment and his discharge from the hospital. The patient was narrowly watched, and whenever the least symptom of an approaching paroxysm of malarial fever exhibited itself quinine was given as a prophylactic. The symptom most often found present, which was supposed to demand the production of a state of cinchonism, was elevated temperature; frequently without the previous occurrence of any chill obvious to the patient's sensations. As often

as the thermometer showed exaltation of temperature, the moment of its delitescence was seized for the exhibition of from ten to twelve grains of quinine in divided doses. The indications of relapse were never so urgent as to require immediate cinchonism without awaiting abatement of the febrile movement, as is usually done in well pronounced malarial attacks. Cooper was discharged on the first day of December.

The patient was greatly benefitted by the treatment received in hospital and has not been heard of since his discharge; but it is altogether unlikely that he will ever recover from the effects of such a serious state of cachexy, at a period of life when the proper nutrition and development of the system demands healthy blood.

To those of our profession whose lots are cast in the malarial districts of the South and West, the study of this poison and its influence upon the human system is of paramount importance. The essential nature of the poison, its pathology or the changes it operates in the system, as well as the most certain therapeutics, are all problems as yet undetermined. It may be that malarial *paroxysms* are among that limited number of diseases, in regard to which our knowledge of therapeutics is in advance of our knowledge of pathology, for we look with a confidence rarely misplaced for the action of the great specific; but this statement cannot apply to malarial cachexy. Those physicians who spend long professional lives in combatting this subtle poison, and in striving to cure its effects, well know how hard it is to dogmatize principles of treatment which shall be generally applicable to its cachexy. We rationally and properly enough resort to iron for the restoration of the damaged blood, but after long and ineffectual courses of chalybeate treatment, I have seen convalescence date from a mercurial or saline purge, or from the use of nitro-muriatic acid, muriate of ammonia, or some other eliminant or alterative. Malaria, like most poisons whose operation is expended primarily and chiefly upon the blood, entails other deleterious effects upon this fluid, from those derangements of secretions and excretions, which must always follow as necessary consequences upon any sort of blood inquination. Primary blood poisons alter

the chemistry of that fluid so that the usual processes of elimination are not performed, and accumulations of secondary poisons occur from imperfect depuration. These secondary changes perpetually differ in different cases, as one or another secretion or excretion is impeded; but even admitting that in a certain number of individuals they are identically the same, they possess an always shifting scale of importance according to peculiarities of constitution. As, for example, a similar degree of diffusion of biliary constituents might in one patient produce convulsions, in another profound sedation, in another very slight effects beyond discoloration of the tissues. These considerations render every case of malarial poisoning a distinct and special study.

The Class will remember that some of the most notable examples of malarial cachexy were seen in the persons of four sailors landed from a ship just arrived from Aspinwall. These men had suffered primary attacks of remittent fever while in port at Aspinwall, and after their departure had undergone repeated recurrences of an intermittent character. It is a point of primary importance, in the treatment of malarial cachexia, to prevent relapses. Every paroxysm brings with it renewed intensification of the anemia and augments, sometimes out of all proportion to the severity of the fit, the difficulties of cure. There seems to me no mode of achieving this end which equals in reliability or convenience the method I have usually pursued under observation of the Class. This has been to administer quinine as a prophylactic upon the instant that any symptom threatened a return of the fits, while, at the same time, restorative and analeptic measures were pursued, especially during the interims. Take for the illustration of this method, the case of Nathan Davis, bed 280 (one of the Aspinwall seamen). He was admitted on the 19th of November with high fever: The first prescription was tinct. digitalis $\frac{3}{iiij}$, spts. nitr. $\frac{3}{j}$, neutral mixture $\frac{3}{iiiss}$; tablespoonful every two hours during fever. As soon as the fever began to decline, four five-grain doses of quinine in solution were given. On the 21st the patient was ordered a tablespoonful thrice daily of the following mixture: Sulph. quinine $\frac{3}{i}$; nitro. hydrochlo. acid (dilute) $\frac{3}{i}$; mur. tinct. of iron $\frac{3}{iv}$; water $\frac{3}{iv}$;

syrup ginger $\frac{3}{i}$. On the 23d, three pills of five grains of quinine each were taken. On the 25th he got the following prescription : Sulph. quinine $\frac{3}{i}$; nitro-hydrochloric acid (dilute) $\frac{3}{ss}$; tinct. cinchona comp. $\frac{3}{iv}$: tablespoonful thrice daily in sweetened water. On the 27th he was ordered one of the following pills three times daily : Sulph. quinine $\frac{3}{ij}$; arsenious acid, grs. iss; extr. nux vomica $\frac{3}{i}$; make twenty pills. Prescription repeated on the 4th of December. December 10th, ordered sulph. quinine $\frac{3}{i}$; ammon. sulph. iron $\frac{3}{ij}$; sulph. acid (dilute) $\frac{3}{i}$; cinnamon water $\frac{3}{iv}$: tablespoonful in sweetened water three times daily. The patient had the best diet the hospital afforded and porter daily. He was discharged convalescent on the 25th of December.

Several of the cases of malarial toxæmia presented anomalous symptoms. John Noland, an Irish laborer, 45 years of age, was admitted to ward 21, bed 316, on the fourth of December. He was brought in late at night, in an insensible state, and with cold extremities and surface. Enough of the history of the attack was obtained to give information that two or more spells of drowsiness or stupor had preceded the present one, well marked as to periodicity. Guided by this point of knowledge, Mr. Nicholson, the ward student, very properly ordered $\frac{3}{ss}$ quinine in solution by rectal injection. Sinapisms were applied and the injection repeated in three hours. As soon as the patient was able to swallow, he was ordered a tablespoonful every two hours of the following: carb. ammon, $\frac{3}{i}$; French brandy, $\frac{3}{ij}$; water, $\frac{3}{iv}$. The case promptly convalesced.

David Allen, a steamboat hand, aged fifty, was admitted to ward 18, bed 256, on the 12th of December. This patient was brought in completely comatosed ; without convulsive seizure, but with right hemiplegia. The history of the case was, that he had had an attack of malarial fever two weeks before admission, after which he had made a trip up Red River. On the return voyage, he had a chill on the 8th, and another on the 10th, and again on the 12th, when the boat landed here he was supposed to be suffering under the effects of a chill. A hackney coach was called and he was placed in it for the purpose of being conveyed to the residence of a sister living in this city, but being unable to

give her address in an intelligible manner, the driver brought him to the hospital. Although the case was considered utterly hopeless, Mr. Nicholson, by my advice, gave four grains of sulphate of quinine by hypodermic injection, and applied moderately cold cloths over the head with a blister to the back of the neck. The patient died about twelve hours after his admission. Four hours prior to death, his temperature, in the axilla, was found to be 102° , and his surface generally warm. This observation of high temperature is sufficient to justify the belief that he did not die from the congestion alone or the overwhelming toxic effect alone of the malarial poison. My diagnosis was death from cerebral haemorrhage; the giving way of the vascular walls being attributable in part to their weakened texture from the state of cachexia pre-existing, and in part from the additional pressure put upon them by the interruptions of circulation attendant upon the cold stage. This diagnosis rests alone upon the previous history of the case, and upon the reaction,—the apparent hot stage denoted by his elevated temperature.

All efforts to obtain a post-mortem were fruitless, nor was it by any means certain that an autopsy would have made the cause of the haemorrhage any more positive than the facts previously in our possession, although determining in regard to its occurrence and locality.

The occurrence of haemorrhage in connection with certain fevers and blood poisons, is full of interest to the student of pathology. Typhoid fever seems to induce a genuine haemorrhagic diathesis, and it does not strike us with astonishment that the capillaries of the nasal mucous membrane are the first to give way, for they are the weakest of the system. In yellow fever the whole capillary system seems texturally rotten, and bleeding may occur from any surface. In malarial fever haemorrhages are far less commonly the rule, but yet do occur so frequently as to occasion no surprise on the part of experienced observers. When haemorrhage does take place in malarial fevers, what causes determine its occurrence and localization? Certainly the same that exist in other forms of fever; namely: weakened capillary walls; increased pressure, and blood so changed that

its exosmosis is more liable to occur. The last is general in its effects, the two former are often local, but may combine their influence upon the same group or system of capillaries, when haemorrhage must surely occur. Looking at haemorrhage in this light it is purely a physical question of strain and resistance. Increase the former indefinitely the latter remaining unchanged, and haemorrhage will take place; diminish the latter to a sufficient degree, the former being fixed, and it also occurs. These physical principles enter into the composition of the pathology of haemorrhage connected with fevers, and shape our conclusions both with respect to its gravity and treatment. If the haemorrhage owes its existence wholly to increased pressure, as is probably the case in the epistaxis which sometimes attends the febrile stage of malarial fever, it is a far less serious matter than those forms which take place when the heart's action is enfeebled and the vital forces depressed as during the cold stage. Do these views of the pathology of haemorrhage in fevers help us to understand the phenomena of the paroxysmal haematuria recently attending so many of the malarial attacks throughout large portions of the South? I think they do. The Class will remember that a patient supposed to be suffering under an attack of this form of disease, was sent to the lecture-room from a ward not under my charge and was made the subject of part of a clinical lecture. The opinion was then announced that three conditions might combine to produce bleeding from the kidneys in malaria or other forms of fever. These are: one, pathological as it relates to the fluids,—altered blood; one, pathological as it relates to the solids,—weakened capillary walls; one, pathological as it relates to the dynamics of the system,—altered pressure. Either condition or cause in excessive action is sufficient to produce it, if two or more combine the result more surely eventuates. The connection of these causes with malarial haematuria, although fluctuating respectively as to degree of influence may be represented as follows: In all forms of malarial toxæmia the blood undergoes changes more or less strongly marked; the alteration in this type of the disease (malarial haematuria) is especially profound, as denoted by the yellow hue of the skin. The very rapid diffusion of this color indicates

that it is not due simply to excessive secretion of bile, but either to its arrested consumption ("oxidation") in the system, or to its obstructed discharge from the liver. Arrested consumption affords the least assailable explanation of this phenomenon—for when the chemistry of the human system is greatly deranged either by sudden perversion, as in excessive fright and from the bites of venomous reptiles, or by slower processes of depravation, as in pyæmia or chronic malarial toxæmia, bile accumulates in the blood because its consumption or "oxidation" ceases. We are not authorized to assert that acute malarial toxæmia, or a sudden overwhelming of the blood with this poison may not also produce the same result. We have then as one fact, blood profoundly altered, both by the decomposition it has suffered primarily from malarial poisoning and by the diffusion of bile constituents in great quantities through its mass. We have then as a second fact, impaired nutrition, as it relates to the tissues *generally* from the malarial cachexy present. It is also extremely probable that there is impaired nutrition of the kidneys *specially*, from their efforts to eliminate the blood of its various poisons, particularly of the bile elements it contains. The mischief wrought by bile constituents in the circulation, is not confined to changes in the corpuscles, but extends to the solids, and according to late researches fatty degeneration is one of the common results of the diffusion of biliary pigments through the system. As these substances are very largely eliminated by the kidneys, it is reasonable that the increased ratio of their contact with the renal structures, should give these organs increased liability to whatever character of degeneration bile constituents are capable of inducing.

Then, as the third fact, we have the increased pressure or strain upon the capillary walls from the impeded circulation or "congestion" of the cold stage, or from the augmented heart action during the fever.

We must, in regard to the eccentric phenomena of malarial toxæmia, adopt one, or both conjointly, of two modes of accounting for them: either that the poison is capable of undergoing intrinsic changes with different seasons and different localities, is polymorphous, or is capable of combining with itself other poisons, which disturb the ordinary uniformity of its effects; or,

on the other hand, that it finds, in the various constitutions it attacks, certain conditions, tangible or intangible, which give it more intensity or give its symptoms some peculiar phase and direction. Then, to account for those otherwise inexplicable facts that it occasionally occurs that some one of these eccentricities becomes so common as to be almost the *rule* instead of the exception, as in the case of malarial hematuria in certain localities, we must say that the malarial poison has either acquired some new property, which gives it especial liability to produce disease of the kidneys, or, that it finds the systems of its subjects in some peculiar pathological state, which favors the occurrence of renal hæmorrhage. It is impossible to determine which one of these premises is exclusively true, or that either, or both, may not be true as it respects different cases of anomalous forms of malarial fever. I believe that the latter—that is, the state of the system at period of attack—more often becomes the ruling pathogenetic condition. Taking again the anomaly of malarial hematuria for illustrating this opinion: the patients suffering these attacks are almost, without exception, subjects of chronic malarial toxæmia; the kidneys have so long been engaged in removing biliary materials from the blood, that more or less degeneration, perhaps sometimes fatty, has ensued; in this condition of the system a new paroxysm occurs, in which the essential nature of the malarial poison may not differ in the least degree from previous doses; but during the obstructed circulation of the cold stage the rotten capillaries give way and hæmorrhage takes place. But there are some cases of this anomalous type to which this explanation of fatty degeneration is not applicable. In the third case which came under my observation hæmorrhage occurred after the second and third chills, and at the end of forty-eight hours after the last chill the urine yielded not a trace of albumen, although submitted to careful and repeated tests. Repair, after fatty degeneration, would not be likely to occur in so short a space, if at all. But notwithstanding the fact, that the recovery of this patient seemed to be both prompt and complete—for I had opportunity to examine his urine repeatedly, with the microscope as well as tests, for ten days after the last chill—he died of cerebral hæmorrhage occurring during the cold stage of a malarial paroxysm about two

months afterwards. It is probable that in his case the state of mal-nutrition of capillary walls was general. But although such instances of rapid recovery are sufficient evidence that in them, at least, fatty change has not occurred, they do not prove that the intermediate steps of that process—the erroneous nutrition which must first precede all forms of degeneration—may not have taken place to such an extent as to render cleavage or breaking down of fleshy structures more easy.

If students will closely analyze these processes of study, and in future observations of malarial eccentricities will spare no effort to take into account the pathological tendencies of their patients, which underlie the attacks, and measure these with all those circumstances and facts, which would be likely to affect the quantity or quality of the dose of malarial poison, more positive conclusions will some day reward our joint labors.

The whole number of cases of malarial fever treated in my ward was sixty, divided in the following manner as it respects type: Remittent 2, intermittent 58. The remittent cases were both in ward 18, beds 256 and 267. One was a young sailor just arrived from the West Indies, the other case originated in the lower part of the city. Both recovered under very similar treatment, which consisted of neutral or effervescent mixtures and cooling drinks, with tepid sponging during the febrile exacerbations, and of moderate doses of quinine during apyrexia.

The cases of intermittent fever had the following division as to type: Tertian 33; quotidian 18; quartan 3; pernicious 4. The last named classification includes the two cases above described; the case of supposed malarial hematuria also referred to above, and an Irish ditcher in ward 19, whose case was marked by persistent pain in the head, blunted perceptions and bowels so obstinately costive as to require positive doses of croton oil. One of these cases alone proved fatal, that of David Allen.

Polyuria—(Clinical Notes by Mr. J. J. Reilly and C. A. South, M. D.)

George Hullfish, aged 50 years, native of Philadelphia, by occupation, a blacksmith, was admitted to ward 21, bed 314, on the 25th of November. The patient stated that he had enjoyed

uninterrupted health until 1866, and knows of no tendency on his part to any particular form of disease; said that his father and three uncles died of apoplexy. In 1866, he had an attack of intermittent fever while serving on a gunboat below Philadelphia. In 1867, he came South, and engaged work at a draining machine in Plaquemine Parish. About the 18th of September, 1868, he was again attacked with tertian intermittent. Some months before the return of the chills he suffered a violent fall, receiving a blow upon the back of the head and severe concussion of the spine; he did not think he had ever fully recovered from the injuries then incurred.

He reached the city on the 31st of October, and was assigned to ward 19 to be treated for ague complicated with dysentery. Finding that the dysenteric symptoms arose from internal piles, I sent him to Prof. Stone's ward on the 2d of November. On the 5th of November, Prof. S. operated upon him in the presence of the Class. While in the surgical ward he suffered several paroxysms of chills, and about five days after the operation for piles found himself passing more than the usual quantity of urine.

On the 25th of November he was sent back to my care, and placed in ward 21. At date of second admission patient had a sallow cachectic appearance, said that he had lost flesh rapidly; complained of general weakness; pain in lumbar region, some cough and pain referred to right side of the chest; physical examination excluded any pulmonary disease; pulse on 26th, 80; temperature 97; skin soft and pliable; slight thirst; no appetite; one healthy stool in twenty-four hours. The following is a tabulated summary of observations upon his urine with the treatment annexed:

DATE.	Amount of Urine in ozs. per diem	Specific Gravity	TREATMENT.
Dec. 2...	130	.....	Gallic acid, grs. v; camphor water, $\frac{1}{2}$ ss; thrice daily. Dover's powder, grs. x, night and morning; dry cups to lumbar region.
4*	174	.....	R. Sulph. quinine, $\frac{1}{2}$ ij; tannic acid, $\frac{1}{2}$ iss; water, $\frac{1}{2}$ iv. Tablespoonful thrice daily.
5†	96	1011	Continue.
6...	128	1011	Continue.
7...	148	1010	Continue.
8...	119	1008	Continue.
11...	124	.....	R. Solid turpentine, $\frac{1}{2}$ i; pul. opium, grs. iv. Make four pills, one each night; continue quinine and tannin.
12...	107	1009	
13...	119	1011	Quinine mixture omitted; turpentine and opium continued.
14...	105	1010	
15...	112	1010	
16...	114	1010	
17...	100	1010	
18...	120	1010	
19...	128	1010	
20...	128	1010	Four five grain doses of quinine in solution; turpentine and opium continued.
21...	87	1012	
23...	110	1010	R. Tinct Digitalis, tinct. nux vomica, mur. tinct. iron, aa $\frac{1}{2}$ ij. Mix. Sixty drops three times daily; opium and turpentine at night.
24...	98	1010	
25...	88	1012	
26...	96	1016	
27...	104	1015	
28‡	80	1016	Five grains of quinine in solution twice daily; opium and turpentine continued.
29...	82	1019	
30...	80	1014	
31...	99	1020	
Jan. 1...	80	1016	
2...	98	1016	
3...	80	1016	
4...	104	1010	
5...	100	1016	
6...	82	1020	
7...	96	1020	
8...	76	1018	

* Had a chill at half-past one P. M.

† Chill same hour as yesterday. Pulse at 6 P. M. 108; temp. 10.2.4

‡ Had copious sweat night of 27th.

The patient was discharged at his own request on the 10th of January.

I was somewhat in doubt whether this case was of sufficient interest to entitle it to admission in this publication, but as it had been reported with considerable care I have determined to insert it.

In very many cases of polyuria, or diabetes insipidus, the exciting cause is left to conjecture, and often to very wide conjecture. The primary cause in this case may have arisen from the fall the patient had experienced, although separated by an interval of near twelve months from the first symptom of the affection. Injuries of nerve substance, and especially those inflicted in the vicinity of the fourth ventricle are recognized as among the common exciting causes of saccharine diabetes, and it is now well admitted that similar causes may give rise either to the insipid or saccharine form of the disease. Moreover, we cannot determine in either surgical or idiopathic diseases of nerve structure, how long it will be before they culminate to the point of ultimate mischief. At no one of the repeated examinations made was any albumen or sugar discovered in the urine.

That portion of the therapeutics of this case, which includes the administration of a terebinthinate, required a word of explanation to the Class. Often in chronic forms of profuse urinary secretion ; or, in those cases where the excessive secretion is due to disturbances in "some part of the chain of sympathetic nerves, which controls the action of the contractile tissues of the renal vessels," stimulating diuretics are highly serviceable ; while in some, at least of those conditions of altered structure of the kidney accompanied by diuresis, they would prove hurtful.

Turpentine is therefore a prescription more applicable to functional polyuria than that dependent upon structural disease.

This patient seemed to improve under its use, and I therefore continued it for so long a period, notwithstanding the fact that, although the occurrence and perpetuation of polyuria do not imply necessary structural alterations of the kidney, yet excessive functional labor on the part of any organ must sooner or later induce pathological alterations of its texture.

✓ *Albuminuria—Saturnine-Poisoning.* (*Clinical Notes by E. Paul Sale, M. D.*) John Shawn, aged 36 years, by birth a German, occupation fireman on a steamship; was admitted to ward 18, bed 264, on the 5th day of March. In the history given of himself, the patient stated that he was under medical treatment for three weeks of October, 1868, for violent frontal cephalalgia and nausea. Two weeks after dismissal from treatment and after resumption of his usual work, these symptoms recurred and he was again under medical treatment for one month. Being partially recovered, he made a trip to Galveston, but returned to this city again suffering with his former symptoms, and in addition to them violent abdominal pains with obstinate constipation. He had been working a good deal with lead in repainting the ship. He was admitted to ward 13 of the Charity Hospital on the 1st of February and remained until the 16th. The physician in attendance pronounced his disease to be of the kidneys. He demanded his discharge because he was disheartened about his recovery, and had determined to resume his occupation in spite of sickness. While on his return voyage from another trip to Galveston and while "firing up," he was seized with a fainting spell. Upon recovery from this he found himself suffering from dyspnœa which has persisted to the present time. Two months before the first attack, or in August, he noticed his urine augmented in quantity and of an unnatural color. He attributed these changes to drinking ice water. This augmentation of urinary secretion has increased ever since he first observed it. He has been regular in his personal habits; has not had syphilis; drank a little whisky daily, and drank it "neat," but was never intoxicated.

The patient is five feet eight and one-half inches in height; weighed at time of admission about one hundred and seventy-five pounds; had a sallow, waxy complexion, and was slightly anasarcaous; this was especially noticeable in the puffiness of the face. He claimed that his appetite and digestion were good; no disease of the digestive organs could be detected.

The superficial veins of the thorax were abnormally large. The two sides of the chest were symmetrical in size; each measuring twenty-one inches over the nipple. The patient complained

greatly of difficult breathing. The acts of respiration numbered forty-two to the minute and were attended by considerable exaggeration of vesicular murmur over the whole chest. Percussion and palpation gave normal results. A distinct and prolonged systolic murmur was heard at the base of the heart and propagated along the large blood vessels.

The following table shows the results of examination of urine on the dates mentioned :

March.	Diurnal Quantity.	Specific Gravity.	Proportion Solidified by heat.
14th	108 ozs.	1010	1-8 of Tube.
15th	114 "	1010	1-12 "
16th	118 "	1010	1-12 "
*17th	168 "	1010	1-5 "
18th	90 "	1014	1-3 "
19th	120 "	1010	1-12 "
20th	120 "	1011	Trace.
21st	106 "	1010	1-16 "

The treatment of this case was directed to the purposes of controlling the excessive function of the kidneys and of relieving symptoms of constitutional disturbance, probably superinduced by faulty renal elimination. For the former purpose the astrin-gent preparations of iron were given, and from five to ten grains of Dover's powders every night, warm baths were also ordered, and the surface protected from cold. The remedies to meet the latter indication were varied in accordance with the particular character of the symptom ; generally, however, elaterium, or bi-tartrate potash lemonade was considered the most appropriate prescription.

One of the most interesting points of inquiry in relation to this case, is the probable connection between the disease of the kidneys and saturnine toxæmia. The history of the case gives conclusive proof of lead poisoning, but it also includes the account of some urinary disease prior to the painting of the ship and attack of colic, which occurred subsequently. In regard to the frequency of the occurrence of albuminuria in connection with lead poisoning, the following passage from Robert's late work on

* Patient was in bed on the 17th with headache and vomiting, and was ordered a purge of elaterium ; on the 18th he was again better and out of bed.

"Urinary and Renal Diseases," will afford valuable information.

"The occurrence of albumen in the urine of persons poisoned with lead, although repeatedly observed, was not regarded as anything more than a coincidence until Ollivier demonstrated, by experiments on animals and clinical observations, the existence of a causal connection between them. Ollivier found that dogs, rabbits, and guinea pigs, when poisoned with repeated doses of carbonate of lead, invariably passed an albuminous urine, and that their kidneys exhibited signs of incipient organic disease. He also collected 15 examples of albuminuria in persons poisoned with lead. Seven of these had temporary albuminuria; in three, the albuminuria persisted during the continuance of the saturnine symptoms; and in four, genuine Bright's disease had been produced. In addition to these observations, he examined the urine of 37 persons affected with diverse manifestations of lead poisoning in the Hôpital de la Charité: of these, 9 had albuminous urine. These observations have been confirmed by Lanceereaux and Danjoy. Ollivier found that both the urine and the kidneys in these cases contained traces of lead. He inferred that the existence of lead in the kidneys induced an organic lesion of these organs, and that the albuminuria was the consequence of that lesion."

During the latter part of the lecture season I treated in ward 26 a case of lead colic, in which instance no albumen was found in the urine after coming under my care, but as he had been treated for some days prior to this time, I am not authorized to say that it had not existed.

In examining the urine of the four cases of lead poisoning including the recent cases, and those of lead paralysis, which my wards contained, with a view to ascertain whether albumen was present, it was discovered in Shawn's urine only, but in every one of these cases, the amount of renal secretion was in excess of the normal standard. These observations seem to support the opinions recently advanced in regard to the similarity of functional and structural change induced in the kidney by the gouty diathesis and the presence, or passage of lead in, and through the system. The kidney becomes altered as a filter, so as to permit the escape of a larger proportion of water from the blood and, it may be, a relatively smaller proportion of solid constituents.

Epilepsy. Seminal Losses.—Self-pollution during sleep. (*Clinical Notes by F. M. McCormick, M. D.*)—E. F., aged 18 years, born in Louisiana, was admitted to ward 21, bed 309, on the 10th of February. No family tendency to diseases of the nervous system, nor any hereditary affection. Has spent the last five years in traveling through Mexico, West Indies and Brazil. Contracted the habit of masturbation at thirteen, and continued the practice for near three years, when he abandoned it. Had his first epileptic seizure in Brazil, fourteen months before admission. He underwent four months of treatment in hospital at Rio Janeiro, and was discharged much improved. The fits were more frequent and severe shortly after his first attack than at any time since. They would then recur every two or three days, and occasionally two fits would take place upon the same day; now they are not often more frequent than one in two weeks;—sometimes as much as a month will intervene between paroxysms.

The patient has been subject to seminal emissions during sleep for a length of time that he is not able to fix. He does not think they have ever occurred oftener than once in two weeks, and he is not able to note any change in his sensations or in his liability to convulsions as connected with them.

The general appearance of the patient was that of a healthy, well-developed youth. His appetite and digestion were good; bowels rather costive, but readily moved by laxatives; circulation and respiration natural; urine normal.

Although exhibiting the “sheep-facedness” and lack of confidence of victims to the habit of masturbating, he appeared anxious to be cured and willingly submitted to such examinations and treatment as were ordered.

In making practical application of the doctrines of pathology and treatment of epilepsy, so often impressed upon my pupils, I taught that in this case, it was so probable that the exciting cause was connected with the reproductive system that it was of first importance to ascertain the condition of the genital organs in respect to any obvious derangement or abnormality. We do not admit the occurrence of epilepsy except through the presence of an exciting cause, and we therefore, in each new case, call in aid all points of history as well as all morbid phenomena to

enable us to localize the point of action of this "excitation" and determine its nature, and thus with better intelligence direct our energies to its removal. However impossible it may be to explain the ultimate pathology of this case, or to unravel the mysterious line of connection between the masturbation and seminal losses, and the epilepsy, clinical observation teaches that there is between them the inter-dependence of cause and effect.

With such views as these, the first steps of treatment would look to the cure of the habit of masturbating and of the nocturnal seminal emissions. Accepting the patient's solemn asseverations that this habit was entirely abandoned and had not been resorted to since he had learned its pernicious results, the first prescriptions were addressed to the double purpose of controlling general nervous excitability and of preventing the emission during sleep. He was therefore ordered to have thrice daily a pill containing sulph. zinc., pul. rhubarb, extract hyoscyamus, aa grs. ij; extract belladonna gr. $\frac{1}{4}$; these pills to be reduced to two daily as soon as obvious influence of belladonna was noted. At bed-time each night he took a tablespoonful of the following mixture: R. Bromide potas., $\frac{3}{ss}$; tinct. lupulin, $\frac{3}{i}$; camphor water, $\frac{3}{iiij}$. Mix. In the presence of the Class, a few drops of a ten-grain solution of nitrate of silver were carried into the urethra and left near the mouths of the seminal ducts. The elongated prepuce was drawn back and after an offensive accumulation of sebaceous matter had been washed away, the whole glans was thoroughly sponged with the solution of nitrate of silver.

After having pursued this plan of treatment for a fortnight without good results, a watch was placed over the patient to determine if he did, or did not, secretly masturbate. It was thus discovered that he practised masturbation while sleeping; not alone at night when the lights of the ward were turned down but upon one occasion when he had fallen asleep in the open ward during the day. Upon learning this fact, I advised his mother, a woman of much energy and intelligence, to take him home and tie his hands nightly to the bed-posts. She adopted this expedient, and fearing afterwards from observations prompted by her affectionate vigilance, that he was still capable of turning his

body so as to excite his genitals, she tied his feet in the same manner as his hands.

He remained under my care until the 20th of April, at which date his mother took him to the country much improved in appearance and condition.

Masturbation must therefore be added to the list of somnambulic crimes. It is not wonderful that it should be so with those unfortunate individuals who become confirmed victims to the habit. The human organism is so constituted that those long established modes of thought and habit to whose effects, whether psychical or somatic, the term "moral" is properly applicable, and of which we speak as "moral influences," exercise their sway over it more completely during imperfect sleep than while the subjects are fully awake, because at that time the control of the will is altogether withdrawn, and unconscious sensations and actions are left to run riot.

* *Hydropneumothorax, Pulmonary Tuberculosis—Death and Autopsy.*—(Reported by C. H. Kelly, M. D., Chief of Clinic to the Professor of Theory and Practice of Medicine.)—Edward McCullum, Irishman, aged 31, fireman on steamboat, entered ward 18, bed 270, on afternoon of March 1st. Examined morning of the 2d. Complains of pain in his right chest, and lies constantly on the left side. There are great prostration and distress; face somewhat livid; pulse weak, 120 to the minute; is sweating profusely; respiration labored and increased in frequency, 24 per minute; has some cough and expectorates nummular sputa. Examination of the chest shows considerable enlargement of the right side and bulging of the intercostal spaces, with greatly diminished mobility; clear tympanitic percussion resonance well marked all over the right side, but particularly so down the axillary line, and extending beyond the middle of the sternum to the left; vesicular respiratory murmur not perceptible anywhere in the right chest; clear, musical amphoric respiration, with whispering

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* I am indebted to my efficient chief of clinic for a report of this case and several which follow. They all occurred in my hospital service, and were subjects of frequent comment at the bedside and in the more formal clinical lectures delivered in the amphitheatre of the hospital.

amphoric voice being heard instead. Left side there is great mobility of the chest walls as compared with the right; percussion resonance increased; rude supplementary respiration; apex beat of heart pushed over to the line of the nipple.

Was attacked suddenly, two nights before admission, on turning over in bed, with acute pain in the right side, of sharp, stabbing character, followed soon after by difficulty in breathing. The pain continuing, and the difficulty of respiration increasing, he entered the hospital as above. Patient gives history of frequent attacks of haemoptysis, usually slight, but had one attack last summer in which the haemorrhage was profuse; has had a cough for a year; is subject to night-sweats, and has lost twenty pounds in weight during the last year.

March 3d. Condition unchanged. Same physical signs as on first examination; pulse 120, somewhat stronger; respirations 28, labored; temperature in right axilla $99.0^{\circ}4$.

4th. Tympanitic resonance extends to left border of the sternum; apex beat of heart beyond the left nipple, showing still further displacement of the mediastinum; on practising succussion, slight splashing is heard accompanied by very hollow musical reverberations; no dullness on percussion can be detected, showing amount of liquid effusion to be slight.

6th. Succussion readily produced, metallic tinkling frequent and unusually well marked; some dullness at lower portion of chest when patient is raised up, but upper limit of the fluid cannot be determined owing to soreness of blistered surface precluding percussion (blister was applied over right chest evening of the 2d). Pulse 130; respirations 44; temperature $101.0^{\circ}.5$; some respiratory sounds are heard over apex of right lung; tympanitic resonance extends still further to the left; apex of heart beats between sixth and seventh ribs and outside of left nipple; lividity of face increased; is constantly drenched with perspiration; strength failing.

7th—Pulse 120; respirations 34; temperature $100.0^{\circ}.5$.

8th—Pulse 140; respirations 40; temperature $100.0^{\circ}.8$.

Evening—Pulse 150; temperature 103° .

9th—Pulse 135; respirations 40; temperature 100° . Respirations very labored; tongue moist; still sweating copiously; lies

with eyes half open; is slightly delirious. On account of his weakness no physical examination has been attempted since the 6th. Died night of the 9th, towards morning.

Treatment was stimulating and nourishing; essence of beef, eggs, milk, milk-punch being given freely. Diagnosis was hydro-pneumothorax, resulting probably from rupture of tuberculous cavity.

Post-mortem by Dr. Chaillé on the morning of the 10th. The bulging of the right chest, as the subject laid on the table, was very evident to the eye, intercostal spaces were distended; chest sounded like a drum when percussed; splashing was distinctly heard on jarring the subject. A sudden gush of air followed the entrance of the knife into the right pleural cavity. The sternum being removed, the lung was seen collapsed against the spine at the upper back part of the chest and connected, by one or two long bands of adhesion, to its lateral wall; its apex was closely adherent by old adhesions to the cul-de-sac, extending above the first rib. The parietal and pulmonic surfaces of the pleura were covered by recent false membrane smeared over with pus; about a pint and a half of yellow, healthy pus was found in the cavity. The nozzle of a bellows being introduced into the right bronchus, and the lung inflated, air was observed to bubble up rapidly through the fluids. The point of perforation was found situated in a small cavity in the anterior part of the middle lobe. Tubercular masses were found in both lungs, more numerous in the right, its apex being almost entirely solidified by them. The left cavity was encroached upon by the displacement of the mediastinum. The heart was distended with fluid blood, but otherwise presented a healthy appearance.

Walshe states that if we exclude traumatic cases of pneumothorax, 90 per cent. are due to tuberculous perforation. Its occurrence therefore affords strong presumptive evidence of the existence of tubercles; in this case the history left no room to doubt their presence.

Heart Disease—Pulmonic Obstruction and Aortic Insufficiency.
(Reported by C. H. Kelly, M. D.)—Henry Malone, age 36, sailor, entered ward 21, bed 311, November 27th; is of fine physical

organization and free from hereditary or constitutional disease. Suffered with an attack of rheumatism of about sixteen days duration, in 1862, while in the army of Virginia. Was treated with potash and blistered. Has cupping marks over region of the heart, but gives no history of having had cardiac disease at that or any other time. Has drank freely all his life, and particularly so since the war. Complains of constant pain about the xiphoid cartilage. Has frequent paroxysms of palpitation of the heart, with a "feeling as if it would break," accompanied by panting respiration, lividity of the lips, disposition to faint, and blindness. The paroxysms are not attended by pain; are brought on by any unusual exertion or mental excitement. Six weeks before admission had a cough and expectorated white, frothy mucus, raised with difficulty. Auscultation shows good respiration sounds in both lungs.

A harsh, superficial systolic murmur is heard at the left border of the sternum, just above the third costal cartilage, propagated towards the inner extremity of the left clavicle and ceasing almost abruptly above the second costal cartilage. A shorter and apparently more deeply-seated murmur, following immediately upon the first, is heard with the heart's diastole, transmitted from the base towards the apex. Posteriorly, a soft-blown murmur, synchronous with the systole, is heard on each side of the vertebral column over the roots of the lungs.

Diagnosis made of obstruction at the pulmonic orifice, and insufficiency of the aortic valves. Was kept awhile in hospital, upon digitalis in combination with bromide of potassium, according to the following formula:

R.	Potas. bromide.....	5iv.
	Tinct. digitalis	3iv.
Aq		3ijss.
M.	S. Take a tablespoonful three times daily.	

Was discharged at his own request, December, 13th, the murmurs remaining unchanged.

The very loud, harsh and superficial character of the pulmonic murmur in this case, and its intimate connection with the regurgitant murmur through the aortic orifice, causing them to appear as one, led, the Class will remember, to the question as to whether aneurism of the aorta was not present. Close examina-

tion, however, showed the difference in rhythm and line of propagation of the murmurs, establishing their duality. The diagnosis of aneurism was rejected, as its only basis was upon the character of the systolic murmur, and the fallacy of trusting to the mere quality of a sound in the diagnosis of lesions of the heart and great blood-vessels is well established. The aneurismal bruit does not appear to be so constant an attendant upon thoracic aneurisms, at least while not very large, as its name and frequency of its occurrence in aneurisms in other situations, would seem to indicate.

Mitral Regurgitation—Œdema and Ascites. (*Reported by C. H. Kelly, M. D.*)—Daniel Dunn, occupation fireman on steamship, age 46, entered ward 18, bed 264, October 10th. Has been a free drinker and dissipated man. Suffered with malarial fever ten years ago, the attacks recurring at irregular intervals for three years. Subsequently his health was perfectly good, until last spring, when he was again attacked with malarial fever of the quotidian type, contracted while ditching along the line of the N. O. & Opelousas R. R., in a highly malarious region. Was treated in hospital for this attack, and after five weeks was discharged convalescent, though not thoroughly restored to strength.

He then shipped for a voyage to British Honduras, and during stormy weather was exposed to water for thirty six hours. Swelling of the feet and ankles came on soon after, followed by enlargement of the abdomen. Returning to New Orleans, he re-entered the hospital as above stated.

On examination, he was found excessively anaemic, his lower extremities edematous, there was also considerable effusion into the abdominal cavity. The apex beat of the heart was found two inches below and a little to the left of the nipple, its impulse being diffused and weak. Auscultation revealed a loud, somewhat harsh murmur, systolic in rhythm, most distinct about an inch to the left of the apex, and transmitted towards the angle of the scapula. A soft, blowing murmur was heard at the base of the heart, extending along the great blood vessels, and having the character of a blood murmur. The click of the semi-lunar valves was clear. Pulse 80; respirations 18; urine healthy.

The diagnosis of mitral insufficiency, with hypertrophy and dilatation, was announced; the œdema and ascites being considered as dependent upon the cardiac lesion and the watery state of the blood.

To enrich the impoverished blood, and strengthen and support the action of the heart, were the evident indications of treatment in this case; this being effected, the disappearance of the dependent dropsical effusions would follow. The full diet of the hospital, with porter or wine thrice daily, was ordered; and chalybeates and tonic remedies, with the special heart tonic, digitalis, were exhibited during the entire period that the patient was under the observation of the Class. The following, a favorite prescription in Prof. Bemiss' wards for conditions of weakened heart with anæmia, was ordered soon after admission, and continued, for the most part, during the entire course of treatment:

R. Tinct. digitalis.....
Tinct. ferri chlor..... aa 3ij,
Tinct. nucis, vomicæ..... 3i. M.
S. Forty to sixty drops three times daily in water.

Occasionally, when it was judged advisable to suspend for a time the administration of digitalis, the potassium-tartrate of iron, in sherry wine, or the citrate of quinine and iron, were substituted for the above. Bitartrate of potassa lemonade was allowed as a drink and to favor diuresis. Hydragogue cathartics were not employed. Steady improvement followed this course of treatment, and by December 3d the œdema and ascites had been entirely removed. The patient continued to improve up to the close of the session; the murmur at the base of the heart disappeared, but that at the apex persisted, retaining to the last the character it presented at the time of the first examination.

This patient was the subject of part of a clinical lecture on the third of December. During his remarks, Prof. Bemiss drew the attention of the students to the valuable illustration afforded by this case of the important influence the state of the blood may exert in the production or perpetuation of dropsical effusions. The patient had a sufficient amount of valve imperfection and leakage to give rise to a loud murmur and also to many evidences of impeded circulation. This we may grant to have been the most important feature in producing the dropsy but it required

an additional feature for its development—hydraemic blood. As the patient became more and more anaemic under the influence of malaria and exposure to severe weather and hardships, serous effusion occurred more readily and the heart as a muscle became more flabby and weakened in the performance of its function. The chain of causes requisite to give rise to dropsy was then complete. In the process of cure the last two causes were simply subtracted by rest and analeptic measures, and the dropsy soon disappeared.

Thus in a large majority of cases of cardiac disease skilful medication is productive of great benefit although we know that the structural lesion is beyond the reach of all therapeutics.

Cardiac Disease, Cirrhosed Liver—Death—Autopsy. (Reported by C. H. Kelly, M. D.)—W. W., German, 47 years of age, carpenter on steamship; entered ward 18, bed 259, Nov. 19th. States that he has never been sick except from an attack of ague in 1860. Has drank strong liquors to excess for many years. During a voyage, fifteen months ago, he was for three days and nights constantly wet by the heavy sea. Two weeks after this exposure he first observed swelling of his feet and ankles, and gradually extending to his abdomen. Returning to New Orleans, was treated by several physicians in private practice, but becoming discouraged, he entered the Charity Hospital during the summer service of Dr. Stone, Jr.; was tapped on the 8th of August, and three and one-half gallons of fluid removed. On the 26th of October, there was again so great an accumulation of fluid as to impede acts of respiration, and Prof. Stone tapped the patient in the presence of the Class, removing four gallons of serum. While the abdominal cavity was empty of fluid, and its walls relaxed, the liver was found reduced in size its surface was nodulated and conjecturally cirrhotic. Examined in ward 18 on the 18th of November, the following was found to be his condition. Abdomen again largely distended with fluid; oedema of lower extremities; face somewhat puffy; an anxious expression of countenance; slight jaundice of a rather lively yellow hue; profound anaemia,—tongue and conjunctiva white and bloodless. Apex beat of the heart removed to the left of the nipple; area of cardiac dullness increased; impulse diffused, and heaving. On aus-

cultation, a prolonged and loud murmur was heard replacing the second sound (diastolic) at the base, transmitted downwards along the axis of the heart, and heard loudest over the middle of the sternum at the line of junction of the fourth costal cartilages. A short blowing murmur with the first sound (systolic), was heard, just above the apex, and transmitted in the direction of the scapular angle. Another systolic murmur was present at the base, extending along the aorta and the great arteries springing from its arch. Respiration was somewhat obstructed by the upward pressure of the diaphragm. The peritoneum, at the umbilicus and at a perforation in the linea alba, just below the ensiform cartilage, was pouched out by the pressure of the fluid within. There was also an oblique inguinal hernia; patient suffered no inconvenience from these protrusions. The diagnosis of cirrhosis of the liver with insufficiency of the aortic and mitral valves was made. The direct murmur at the base of the heart was attributed to degeneration of the inner coat of the aorta, the arteries being found diseased wherever they could be felt. Patient's appetite was good; urine scanty and high colored, but otherwise normal; bowels constipated. This case evidently not admitting of cure, a supporting and palliative treatment was pursued throughout; full diet was allowed. The following was ordered to promote the action of the kidneys and maintain the bowels in a soluble condition:

R	Potass. bitart.....	3 <i>i.</i>
	Infusi. Juniperi.....	0 <i>j.</i>
M. S. To be taken in the course of the day.		

The abdomen was also ordered to be painted over with the tinct. of iodine.

Dec. 1st. R	Pulv. scillæ.....	gr. ij.
	Podophyl.....	gr. ss.
	Ext. hyoscyam.....	gr. iv

M. Ft. in pil. No. ij., one was given in constipation, the bi-tartrate being continued.

Dec. 8th. R	Tinct. digital.....	3 <i>iv.</i>
	Acet. scillæ.....	3 <i>iv.</i>
	Morph. acet.....	gr. i.
	Syrup. prun. virg.....	3 <i>i.</i>
	Aq.....	3 <i>ij.</i> M.
S. Tablespoonful occasionally for troublesome cough.		

Tonics, as the citrate of quinine and iron in infusion of gentian, were also administered according as circumstances seemed to

demand. The above prescriptions are probably sufficient to recall to the memory of the Class the general line of treatment adopted while the patient remained under their observation.

In all cases of dropsy, the physician interrogates three principal organs; the heart, liver and kidneys. Here we have the dropsy dependent upon joint disease of the two first named. Obstruction to the passage of the blood through the contracted liver, being increased by the venous congestion consequent upon the crippled condition of the heart. Death occurred a month or six weeks after the close of the session. The points of most interest revealed by the autopsy, relate to the condition of the liver, heart and blood-vessels. The liver was found considerably diminished in size and much congested—its capsule had undergone a chronic thickening, presenting a pearly, opaque appearance; such as is frequently seen in the capsule of the spleen. The thickening extending with tolerable uniformity over the entire capsule of the organ. On its convex surface, near the lower margin, were numerous nodular masses with intervening spaces where the thickening was not so great.

The heart was greatly hypertrophied, all its cavities dilated, particularly the left auricle; the mitral and aortic orifices were also greatly dilated; the mitral valve had undergone no organic change, but was evidently incompetent to close the dilated orifice. The aortic valves were thickened and roughened by atheromatous degeneration, which they shared together with the aorta and arteries generally.

The regurgitation through the mitral orifice in this case, was not referable to any alteration of the valve, but to the fact that the orifice had enlarged beyond the capacity of the valve to close it, a condition perhaps more often present than is generally supposed. The evidence furnished by auscultation is of but little value, in determining the character of lesions producing abnormal heart-sounds, nor does it enable us to distinguish an insufficiency due to dilation of the orifice, the valve remaining structurally healthy, from that resulting from lesion of the valve itself.

Practically, however, it is not important that the exact nature of the lesions should be determined, the principles of treatment as

far as relates to the heart remain the same in all cases, and are to be based upon the indications derived from the physical condition of the organ as a muscle, and its ability to bear up under the increased labor thrown upon it.

The character of the jaundice in this case was the subject of remarks in a clinical lecture December 13th, the Professor pointing out the distinction between the lively orange hue of the sclerotic and to a certain extent, also of the skin in this case, as contrasted with the dull sallow color of the skin in a case of cirrhosis far advanced which was brought in to the area of the amphitheatre for the purpose of illustrating the diagnosis between true jaundice and acholic jaundice. The conclusion deduced was, that whatever was the form of hepatic disease under which this patient labored, it had not crippled the functions of that organ to such an extent that it was not still capable of affording a free secretion of bile.

✓ *Aneurism of the Ascending Portion of the Arch of the Aorta.*
(Reported by C. H. Kelly, M. D.)—William Willoughby, born in Canada, age 36, by occupation a cotton screwman, entered ward 21, bed 312, February 3d. The patient, a strong, healthy-looking man, complained only of pain in the upper part of the chest, "shooting" to the right shoulder and in the right side of the head and neck, being most severe in the head. Had suffered from these pains for some months. On being stripped the veins of both sides of the neck and of the arms were found turgid. The apex beat of the heart was found in the mammary line a little below its normal position; the cardiac sounds were perfect. Very distinct pulsation, having a heaving character to the hand, was visible at the upper part, and rather to the right of the sternum, at the junction of the second costal cartilage. The chest wall was also slightly bulging, at this point, and there was decided dullness on percussion from the middle of the sternum to about one-half an inch beyond its right border. Quite a perfect reduplication of the heart sounds was heard over the seat of pulsation; no murmur was perceptible with the abnormal sounds. The pulse in the right radial artery was distinctly weaker than in the left. The lungs were healthy. Patient had some difficulty in swallowing solid food. The diagnosis of aneurism of the as-

cending arch was made. Hypodermic injections of morphia and atropia were given at night to relieve the pain and secure sleep. The prominence at the seat of pulsation continued to increase, and the area of dullness extended to about three inches in the lateral and two and a half in the vertical direction.

The aneurism was evidently increasing rapidly in size and seemed about to make its way to the exterior through the chest walls. No additional evidences of pressure accompanied this enlargement of the tumor; the respiration remained normal, there was no increase of venous turgescence, there was only slight difficulty in swallowing solids. The patient was confined to bed, —ice was kept constantly applied to the tumor, and three grains of acetate of lead were given three times a day in the following mixture:

R.	Plumbi acet.....	grs. xcvj.
	Acid acet.....	ij.
	Pulv. opii.....	gr. viij.
	Aq.....	iv.
M. S. Take a teaspoonfnl three times daily.		

This treatment seemed to exert a remarkably beneficial effect; the bulging of the chest was reduced until it was scarcely perceptible, the area of dullness became less, and the force of the pulsations was diminished. The pains however continued, and were the chief source of suffering to the patient, they were only partially relieved by the hypodermic injections notwithstanding the quantities administered were increased to one-half grain of morphia and one twenty-fifth of atropia.

Patient's condition remained unchanged until the close of the session. Death has since occurred, preceded by rapid augmentation of size in the aneurism, and was apparently due to interference with respiration by pressure upon the trachea or bronchi. No post-mortem was permitted.

Aneurism of the Ascending Portion of the Arch of the Aorta.
(Reported by C. H. Kelly, M. D.) (Clinical Notes by Marshall Johnson, M. D.).—Michael McCann, born in Ireland, aged 35, laborer, was admitted to ward 19, bed 281, Nov. 19. Has resided in New Orleans, except during four years service in the army of Virginia, under Stonewall Jackson, for the last twenty two years. Always enjoyed good health up to August, 1868, when he suffered

from what he considered an attack of rheumatism in the right arm and elbow; was treated with liniments etc., up to date of admission without experiencing any relief. During the last three months the pain has increased in severity and extended to the shoulder and corresponding side of the head and neck. Sleeps at night in a semi-recumbent position with his head bent forward on his chest, being unable to assume the horizontal position owing to the excessive pain and difficulty of breathing which it induces. There is evident obstruction to the return of blood from the head and arms, the veins at the root of the neck being enlarged and turgid. There is no difference in the degree of distension of the veins feeding the right or left innominate, which would indicate the descending cava as the seat of obstruction. The pulse in the right radial artery is considerably weaker than in the left. The apex of the heart is felt below and to the left of its normal position; the area of cardiac dullness is somewhat increased; sounds are clear and distinct, the first having somewhat the booming quality usual in hypertrophy of the heart. A double sound synchronous with and resembling the cardiac sounds is heard above the base of the heart over the first bone of the sternum, no bruit can be detected with either of these sounds. A distinct heaving pulsation is felt on pressing the open hand upon the upper bone of the sternum, the pulsation being also plainly evident to the eye when the chest is viewed sideways. No unusual pulsation is felt at the suprasternal notch. Percussion yields a questionable dullness over the seat of pulsation. The respiration as heard over the region of the right bronchus both anteriorly and posteriorly, is of a harsh and somewhat stridulous character; the vesicular murmur throughout the right lung is also appreciably weaker than in the left. Pupils are normal. Patient when questioned says he has a feeling of choking and beating in the upper part of his chest, and has at times difficulty in swallowing solid food.

The case was diagnosed as one of aneurism of the ascending portion of the arch of the aorta, probably extending to or involving the origin of the innominate artery. Considerable cardiac excitement being present at the time of admission, the treatment was first directed to relieving that condition and one drachm each

of bromide of potassium and tincture of hyoscyamus was given in camphor water three times daily. Afterwards on the 22d, the hyoscyamus was omitted, the bromide was reduced to half a drachm, and gtt xv of digitalis were given with each dose; this was continued to the 26th, producing the desired effect.

The pain continuing to increase, and preventing the patient from obtaining sleep, anodynes in full doses were administered, and continued with but little intermission during the entire treatment. The following are some of the formulæ used:

R Morph. Sulph., ext. belladonna, aa grs. ij,
Aq. camphor..... $\frac{2}{3}$ iv. M.
S. Tablespoonful every four hours.

On December 12th the prescription was changed to—

R Morph. sulph..... grs. ij,
Ext. hyoscyami, ext. conii..... aa grs. viij. M.
Ft. in pil. No. iv. S. One to be taken night and morning.

December 27th.—First prescription was renewed.

December 28th.—R Ext. belladonna, morph. sulph., aa grs. ij.
M. Ft. in pil No. vi. S. One night and morning.

Bromide of potassium and digitalis were administered whenever the action of the heart became excited, the prescription most frequently used being—

R Potassii. Bromidi..... $\frac{2}{3}$ ss,
Tinct. digitalis, tinct. Hyoscyami..... aa $\frac{2}{3}$ ij,
Aq. camphor..... ad $\frac{2}{3}$ iv. M.
S. Tablespoonful three times daily.

Under this plan of treatment the patient became more comfortable, suffered less pain and rested better at night, but was still unable to sleep lying down.

On January 2d the administration of anodynes internally was suspended, and their use by hypodermic injection substituted and continued up to Feb. 17th. One-third of a grain of morphia with one-thirty-fifth grain of atropia in xv m. of water was injected nightly. The effect was most admirable. The first injection gave almost complete relief from pain, and the patient slept well lying down all night. The improvement continued after the suspension of the injections; the pains remained slight, he slept well in the horizontal position, and could lie on either side, preferring, however, the right. The physical signs still remained unaltered, except that the pulsation had become rather more distinct.

On March 3d, treatment by the acetate of lead was experiment-

ally adopted with a view of producing consolidation of the tumor; this remedy, formerly in frequent use, but subsequently abandoned, has been recently brought again to the notice of the profession as having produced the best results in some cases; the great apparent benefit which followed its employment in Willoughby's case, in ward 21, led to the hope that it might also prove beneficial in this case. It was exhibited in solution with acetic acid:

R.	Plumbi, acetatis.....	grs. xcvi.
	Acid acet.....	3ij.
	Pulv. opii	grs. viij.
Aq.	.....	3iv.
	M. S.	Teaspoonful three times daily.

The acetate did not seem to act well with this patient; it produced constipation, requiring cathartics to be administered and the patient himself becoming prejudiced against the remedy, the prescription was not renewed.

The Class will recollect that no measures of a lowering nature were employed; the contrary of Valsalva's treatment was pursued; the diet was as good as the hospital afforded, and, though any considerable exertion was forbidden, the patient was not confined to bed. With the exception of the experiment with the acetate of lead, the use of medicines was limited to affording relief from pain, and maintaining a quiet and equable action of the heart.

In this case, as in all others in the wards where the object was simply to relieve pain, a combination of morphia with some one or more of the other vegetable narcotics, usually belladonna, was exhibited preferably to the morphia alone—whether the remedy was given by mouth or by subcutaneous injection; such combination producing the maximum anodyne effect with the minimum of constitutional disturbance.

During the progress of the case two phenomena occurred which, in addition to the occasional dysphagia, and the greater ease of the patient in some positions than others, went to show that the tumor possessed a certain degree of mobility; a character of some importance in the diagnosis of thoracic aneurism. The first was the occurrence of great oedema of the right arm with loss of motion, tactile sensation remaining, while the arm

felt numb; this condition came on gradually, beginning on the 18th of January, and by February 11th had entirely disappeared.

The oedema being confined to the right arm and consequently due to obstruction of the corresponding subclavian vein alone, it is evident that some change in the position, or at least in the direction of pressure of the tumor must have occurred, so also a second change must have preceded the disappearance of the oedema.

The second of these phenomena was observed towards the close of the session, attention being called to it by the patient himself. It was the production of rough, stridulous respiration, evidently dependent upon tracheal obstruction, when the right arm was raised above the head, which the patient effected, the Class will remember, by sliding his right hand up along the bed-post. The obstruction to the respiration—choking, was so great, that the raised position of the arm could only be maintained for a minute or two. The only explanation of this phenomenon is, that by the elevation of the arm a change in the position of the aneurism was effected, causing it to impinge upon the trachea, and most probably in the lateral direction; as even slight pressure in that direction, might effect considerable reduction of the caliber in the trachea by causing the lapping of the free, movable extremities of its cartilaginous arches.

Tabular Summary of Cases treated in the presence of the Class; Service of Prof. Bemiss, arranged according to the "provisional nomenclature" of the London College of Physicians. (1)

GENERAL	DISEASES—	Admit'd	Died.	Disch'g'd	In Hos-
					pital.
	3 Chicken pox	1		1	
	4 Measles	2		2	
	12 Febricula	2		2	
	15 Intermittent fever. Varieties, <i>a</i> , quotidian	18		18	
	" <i>b</i> , tertian.....	33		33	
	" <i>c</i> , quartan.....	3		3	
	16 Remittent	2		2	
(2)	(Pernicious).....	4	1	3	
	21 Mumps	1		1	
	30 Erysipelas.				
	<i>b</i> Cellulo-cutaneous	1		1	
	34 Acute rheumatism	3		3	

Tabular Summary of Cases—Continued.

			Admit'd	Died.	Disch'g'd	In Hos-pital.
(8)	35	Gonorrhœal rheumatism.....	2		2	
	38	Chronic rheumatism	4		3	1
	40	Chronic gout	1			1
	43	Purpura.....				
	a	Simple.....	1			1
	44	Scurvy	1		1	
	46	Syphilis.....				
	b	Secondary syphilis	5		3	2
	52	Scrofula.....				
	a	With tubercle				
(4)		Phthisis pulmonalis.....	20	9	5	6
DISEASES		OF NERVOUS SYSTEM—				
		Diseases of Spinal Cord.				
		Inflammation.				
(5)	b	Myelitis	1		1	
		Diseases of Nerves.				
	83	Paralysis				
	84-2	Hemiplegia, left.....	3			
		(Right, with aphasia).....	1		1	
		(Right, without aphasia)	1		1	
	85-3	Paraplegia	2			
	87-6	Local paralysis.....	1			
	8	Lead paralysis	2	1	1	1
General		Diseases of Nervous System				
	91	Epilepsy	3		2	1
	95	Shaking palsy	2			2
	97	Chorea <i>a</i> acute	1		1	
	100	Neuralgia				
	b	Hemicrania.				
		(without malaria)	1		1	
	c,	Sciatica	3		3	
	108	Delirium tremens	1		1	
Disorders		of the Intellect.				
	104	Mania.				
	a	Acute mania.....	1		1	
	b	Chronic mania	1		1	
DISEASES		OF THE CIRCULATORY SYSTEM—				
		Diseases of the Heart and its Membranes.				
		Diseases of the endocardium.				
	222	Valve disease				
	1	Aortic.....	3	1	1	1
	2	Mitral.....	3	1	2	
	3	Of pulmonary artery	1		1	
		Diseases of the Blood Vessels.				
		Diseases of the arteries.				
(6)	248	Aneurism	4	1	1*	2
DISEASES		OF THE ABSORBENT SYSTEM—				
	264	Inflammation of the lymphatics	1		1	
DISEASES		OF THE RESPIRATORY SYSTEM—				
		Diseases of the Trachea and Bronchi				
	306	Bronchitis.				
	a	Acute				
		" capillary	3		3	
					2	

* Died suddenly a few days after going out. No autopsy.

Tabular Summary of Cases—Continued.

		Admit'd	Died.	Disch'g'd	In Hos-pital.
	b Chronic	2		2	
313	Asthma	2		1	1
<i>Diseases of Lungs.</i>					
314	Pneumonia	3		2	1
320	Cirrhosis (chronic pneumonia)	1			1
321	Emphysema.				
a Vesicular.....		2			2
<i>Diseases of the Pleura.</i>					
329	Pleurisy.....	2		1	1
330	Chronic Pleurisy.....	1		1	
334	Pneumothorax	1	1		
DISEASES OF THE DIGESTIVE SYSTEM—					
<i>Diseases of the Mouth.</i>					
352	Gangrenous stomatitis"	1	1		
<i>Diseases of the Fauces and Palate.</i>					
421	Tonsillitis	1			1
<i>Diseases of the Stomach.</i>					
(49)	Cancer	1	1		
	451 Dilatation (from chronic inflam'mon of pylorus)	1			1
<i>Diseases of the Intestines.</i>					
464	Dysentery.				
a Acute		8		8	
b Chronic		3	1	2	
482	Diarrhoea.				
a Acute		4		4	
b Chronic		2	1		1
484	Colic.				
(902)	Lead colic	2		2	
<i>Diseases of the Liver.</i>					
503	Cirrhosis	1			
<i>Diseases of the Spleen.</i>					
522	Congestion.				
" ague cake.....		3		3	
<i>Diseases of the Peritoneum.</i>					
527	Peritonitis	1			1
DISEASES OF THE URINARY SYSTEM—					
534	Bright's disease.				
1	Acute albuminuria	1		1	
2	Chronic albuminuria.....	1			1
551	Diuresis	2		1	1
DISEASES OF THE GENERATIVE SYSTEM—					
<i>Diseases of the Male Organs of Generation.</i>					
625	Spermatorrhœa.....	2		2	
DISEASES OF THE CUTANEOUS SYSTEM—					
837	Eczema.				
a Simplex		1		1	
c Impetigo-nodes		1		1	
POISONS—					
<i>Vegetable Poisons.</i>					
932	Alcohol	2		2	
	Rhus toxicodendron	1		1	
Totals.....				197	19
				145	33

NOTES TO TABULAR SUMMARY OF CASES.

(1) Aitken, first volume of Clymer's second American Edition, page 173, says of this new Nomenclature. "This is a great achievement. The Registrars General of England, Scotland and Ireland, the chiefs of the Medical Department of the Army and Navy, and of the British troops in India, have all concurred with others in framing the Nomenclature; and therefore it is not unreasonably expected that greater accuracy, certainty, and uniformity for comparison, than heretofore will characterize the statistical records of disease, alike in civil life and in the public services." My zealous and excellent colleague, Prof. Chaillé, was, so far as my knowledge extends, the first to urge the Medical Profession of America to adopt this new Nomenclature; and to him also belongs the credit of having been the first in this country to arrange a statistical study of diseases in accordance with the "Provisional Nomenclature. During his absence, certain circumstances have delayed his publication for a few months, and it is therefore my duty to claim the precedence for him to whom it rightfully belongs, although this classification and others similar may appear in print before his.

(2) Pernicious fevers in the South are so uniformly malarial, that they may be justly classed among these fevers—the observer returning the case under its proper head when it can be determined that it arises from some other form of blood-poison; but they cannot, as a class, be located under the head of either intermittent or remittent attacks exclusively. Individual cases may be classed under one or the other of these types, but in many of them it cannot be determined to which type they belong.

It would seem advisable therefore, to insert the heading "Pernicious," in the new Nomenclature as a class, leaving observers to separate the cases into intermittent or remittent when the diagnosis is possible.

(3) One of the cases returned as gonorrhœal rheumatism was probably without good authority. The case was discussed in presence of the Class, but no diagnosis affirmed. The diagnosis of the other case rests upon the following history and group of symptoms taken from the clinical notes of H. F. Ledet, M. D.

Barthlemy B., aged thirty-four, native of France, contracted gonorrhœa ten months before admission. Five months afterwards had pains in legs with some swelling of knee and ankle, was in Charity Hospital thirteen days and went out relieved. Three months after this had ophthalmia. Entered ward 27, 16th December, "with left ankle and right knee-joints swollen and tender; complains of pain in the hips, lumbar region and groins; cannot walk on account of the pain produced by the effort in the affected knee and ankle. Has frequent desire to urinate with some burning attending each act; slight gleet discharge from urethra, conjunctiva still injected and eyes painful. Treatment, iron, cod liver oil, iodide potash, copaiba, etc." Patient discharged last of March.

(4) My clinics comprised the usual number of cases of consumption and the usual good opportunities for studying that disease. The limits to which I have already extended this paper are so much beyond the first estimate, that I cannot make any farther publication of the notes and material collected than is found in the tabulated report of observations annexed. The measures of treatment were precisely those taught and published annually since I have been connected with this University.

NAME AND NO. BED.	AGE OCCUPATION	WHEN ADMITTED	DATES OF OBSERVATIONS	PULSE.		TEMPERATURE.		RESPIRATIONS.		PHYSICAL SIGNS.		RESULT OF CASE.		
				HIGHEST PULSE	LOWEST PULSE	MEAN PULSE	HIGHEST RANGE	LOWEST RANGE	MEAN PULSE OF TEMPERATURE	NO. OF OBSERVATIONS	HIGHEST RANGE OF TEMPERATURE			
R. Handy*.... Bed 274.	44 Laborer....	May 25....	Oct. 17th to Nov. 17th.	48	144	98	116	57	103.8 98.	99.19	48	40	22 30	
Patrick Kearney† Bed 286.	36 Seaman....	Oct. 26....	Nov. 10th to 18th.	50	70	89.7	18	101.6 97.8 99.5	17	38	26	39.5	Died 9th of November.	
John McDonnell‡ Bed 284.	32 Saaman....	Sept. 19.	Oct. 17th to Nov. 18th.	51	113	98	111.2	62	102.8 98.3 101.7	50	47	18 25	Tympanitic percuussion resonance at second inter-costal space left December. Am- phoric voice and respiration at same region. Diminished percus- sion resonance and bronchial breathing at apex right lung.	
Henry Erless*.... Bed 277.	26 Carpenter	Aug. 28.	Oct. 17th to Nov. 14th.	34	116	84	98.14	38	102.	97	99.16	34	24 18 19	Percuussion resonance diminished at left infraclavicular region. Waxy inspiration and prolonged expiration. Voices exaggerated. Right lung negative results.
													Discharged 15th Nov.	

* This case is included in the table only because the observations upon pulse and temperature are so complete for the last month of the patient's illness.

† Patient weighed on the 27th Oct. 132 pounds; weight in health 150 pounds. Has inflammation of larynx with thickened vocal cords, and epiglottis so inflamed and thickened as to cause stridor in swallowing fluids. No hereditary diathesis.

‡ Patient weighed 119 pounds Oct. 10th; weight in health 144 pounds. Numerous returns of hemoptysis since; temperature always elevated during and after hemoptysis. Last record of temperature on Dec. 1st was 102.8. Died of asthma.

§ Patient weighed Oct. 10th 128 pounds; weight in health 136 pounds. Cannot tell about family diathesis; development insidious in 1867. Had hemoptysis in 1868. Appetite good and no choice in food.

(5) The case of myelitis was an Englishman, twenty-six years of age, who had been confined for twelve months in a northern prison in a damp, badly ventilated cell. During his incarceration he became affected with what was considered rheumatism of the right shoulder and arm principally, but also involving the right leg. Singular feelings of numbness and pricking accompanied the above symptoms. These troubles had progressed until both lower extremities were affected.

The patient was able to walk across the ward with a shuffling gait and with great difficulty; his right leg dragging much more than the left. With a purpose to relieve the neuralgic pain and occasional chroeaic twitchings which distressed him, I prescribed hypodermic injections of sulphate of morphia, grain one-third; sulph. atropia, grain one.thirtieth; pure water, m. xv. The injection answered the above mentioned indications so happily and encouraged the patient so much with the hopes of complete cure, that I advised its daily repetition as long as benefit appeared to attend their use. For forty-nine consecutive days ending with the 21st of January, he took one injection daily of the above strength.

Prior to this date the improvement of the patient had been so constant and so surprisingly great, that a measure of treatment which had at first been instituted only to relieve functional concomitants of the case was afterwards continued because it *seemed* to be exerting curative influence upon the main disease. I have employed the word "seemed" in reference to the action of these injections in curing the myelitis, because I am not prepared to say that the apparent curative influence did not amount solely to relief of functional derangements. These were more than usually prominent in this case, in the form of neuralgic pains, and most annoying muscular twitchings. The anodynes afforded immediate relief to these symptoms, and may, peradventure, have had good effects upon the local disease by virtue of their influence over the vascular supply of nerve structures. The injection was altered January, 21st, by increasing the morphia to gr. ss., and the atropia to one-twenty-fifth, which proportions were continued until the patient was discharged from hospital. He received sixteen injections, one daily, of the strength of the last prescription, thus making a total of sixty-five hypodermic doses of morphia and atropia. The points chosen for this medication were each side of the dorsal portion of the spinal column, and the lower extremities, especially the right side. The patient was gratified by this selection, for it appears much more reasonable to uneducated persons that the remedy should be applied as closely as possible to the seat of the disease. No abscess or unpleasant result of any description followed the employment of the injections. I can also say in this connection that the *same statement will apply to each and all of one hundred and sixty-three instances of subcutaneous injections of medicated solutions practised in my wards and by my instructions during the lecture season.* This very remarkable exemption from any description of accident is due entirely to the unremitting watchfulness and excellent skill exercised by my ward students, Mr. E. G. Nicholson and Mr. (now Doctor) T. S. Kennedy, in the surgical part of the procedure and to the care with which Mr. Lassiter the hospital apothecary prepared the solutions.

Judging from my own observations I should think the instances exceedingly rare in which the point of the syringe stops in a subcutaneous vein in such a position that its contents are emptied into the vein, occasioning syncope, apoplexy, or, as is sometimes charged, embolism. Should the first mentioned accident occur, it does so with "lightning-like rapidity," and the operator should pause and endeavor to "draw the fluid back into the syringe." The bare possibility of such an accident shows the importance of the injunction so frequently repeated in my clinics, that the syringe should be slowly emptied, while the fluid is at the same moment distributed through the areolar tissue by gentle friction with the end of the finger.

The patient with myelitis improved to such a degree that he demanded his discharge, and some weeks ago I saw him in the streets earning his living by an occupation which required a considerable amount of walking.

(6) One of the cases diagnosed as aneurism was interesting both because of its pathological relations and on account of the difficulty in establishing positively, the true character of the disease.

Andrew Peterson, a seaman, 50 years of age, entered ward 18, bed 261, on the 21st of September. A few weeks before admission he had a slight attack of pulmonary haemorrhage. This did not recur, and was neither preceded nor followed by any cough or expectoration. Repeated and careful physical examinations failed to reveal any indications of tubercles. There was no emaciation, his temperature was never elevated above the normal standard and no history of any pulmonary inflammation. The patient complained of pain in his left arm, the force of the radial artery was lessened on that side, and the temperature of the left hand almost always lower than that of the right. The veins of the left arm and the left side of the neck and head, were larger and more turgid than those of the right side. In addition to these symptoms the patient had terrific attacks of angina pectoris, during which he would remain fixed in one position with excessively small pulse and cold extremities. There were no physical signs of aneurism; the heart sounds were somewhat aggravated, but otherwise normal. The apex beat in usual position. The patient's face was more strongly expressive of what has been appropriately termed "heart anguish" than any other case in my wards.

The diagnosis announced to the Class was aneurism of the left subclavian in its first third. Its relations in this part of its course with the pneumogastric, sympathetic and phrenic nerves afford explanation of the angina, from pressure produced by any enlargement of its calibre, while from the same cause pressure upon the left innominate vein would occasion the venous interruption and turgescence previously described.

(7) My thanks are due to my chiefs of clinic, Drs. E. T. Shepard and C. H. Kelly, for their earnest and skilful aid. It is to be regretted that the removal of the former from the city deprives students of his valuable services in some special departments in which he proposes to labor during the coming season. The latter will be found as heretofore, always enthusiastically engaged in his field of duty.

Thanks are also owing to those students who so industriously and patiently made the observations and prepared the notes from which this paper is compiled. They have been credited in every instance in which it was possible to ascertain the authorship, and the titles which they secured at the close of the term have been also attached to their names.

*Surgical Memoranda.—Clinic of PROF. WARREN STONE. By
WARREN STONE, JR., M. D.*

SINCE the clinical report of last year was written, the character of syphilis, as presented to us for treatment in the Charity Hospital, has been observed to have undergone a change. Previous to that period, chancres were almost uniformly of the soft variety, and in most of the cases scarcely admitted of the so called specific treatment. In point of fact, as mentioned in that report, the worst cases we had to contend with were those that had been mercurialized. It is to be regretted that owing to the migratory habits of that class of hospital patients, we were not able to follow up the case and note the after consequences.

During the past summer (1868) a gradual progress towards induration was noticed, and at the opening of the session in the fall it had become the rule.

In consequence we turned to a freer use of mercury—an agent which had been entirely laid aside, not because in certain cases if used carefully it would have done harm but because of the reason that it was believed to be of no service in assisting the local trouble,—many times aggravating it—and furthermore furnishing no positive guarantee against constitutional sequences. Concurrently with the change occurring in this inflammation the same occurred with others not specific. During this period all inflammations were most markedly characterized by the exudation of plastic lymph. This fact we believe should bear with it the most impressive pathological significance. Particular stress is laid upon it, as serving to illustrate the point which we have already maintained, that syphilitic inflammation is subject to the same changes that occur in other inflammations, and most generally keeps active pace with it.

The ardor with which certain drugs have been universally advocated in the treatment of syphilis, seems calculated to lead the careless observer into the belief that they possess antidotal powers. We have never favored this view; our clinical teachings have been to the contrary. The evil effects of such belief have been often observed. It has tended to the senseless abuse of agents active for good in their proper place—the natural reaction resulting in a total abstinence from them. Constitutional syphilis kept even pace with the primary affection; the eruptions beginning generally at a period varying from six weeks to two or three months, and of that character which admits of the free use of mercurials. It may be well to remember that several of the cases were seen at the very onset of the chancre, and immediately placed under active treatment, yet notwithstanding, at the expiration of six weeks, the characteristic blotches made their appearance on the forehead, and thence extended to the trunk. In all of them, however, it soon disappeared under mild alterative treatment. In some, whose vigor of life was at its height of perfection, it was believed that the system was capable of ridding itself unaided of the poison.

However, in the treatment of this disease in all of its stages no idea of the specific action of medicines, as influencing a specific affection, was entertained.

It was considered that the system had been contaminated by a certain specific virus, and that the manifestation of this contamination was influenced by many causes, thus giving rise to various different conditions—the recognition of them determining the treatment to be adopted in each separate case.

The operation of medicines cannot be profitably studied apart from diseased action. This principle was always kept prominently in view. In illustration, let us refer to one of several parallel cases which came under observation during the past winter:

A man, aged about thirty-five years, was admitted into the hospital, early in the fall, suffering with tertiary syphilitic ulcers of the most virulent form. He had been subjected to severe labor,—constant exposure to wind and weather, and had abused himself in various ways.

His general health was wretched, in fact every thing tended to sum up an unfavorable prognosis. He had had his chances about eighteen months or two years previous, and had undergone at different times active treatment—being dosed mostly with mercury and iodide potass. and sarsaparilla.

He was at once placed upon the most nutritious diet procurable in the hospital; cod liver oil; potassio-tart of iron; bark, etc. In a short while he began to improve in general health and his sores to heal. Soon after this periostitis ensued—seizing upon both tibiae, the ulna of one arm and also the frontal bone.

Recourse was had immediately to mercury, while the same general tonic course was continued. As soon as gentle ptyalism was obtained, the severe nocturnal pains so characteristic of this trouble, ceased, and with the gentle use of iodide potass in a bitter infusion, the case convalesced rapidly.

Now had not this condition of periostitis set in, there is no question that his recovery would have been accomplished equally as readily without a grain of mercury. But this peculiar symptom arising, and having found this agent to exert its most prompt and efficient influence over the condition which it repre-

sents, as it does equally as well in other periosteal inflammations not specific, recourse was had to it—without it nothing could have been done—unless perhaps that temporary relief, which might have been obtained from large doses of iodide of potass,—which his stomach would scarcely have borne.

It was by thus paying due respect to the various conditions brought about by the poison in each separate case that we were enabled to secure the most satisfactory results. The cases of organic stricture of the urethra were for the most part the result of gonorrhœa—and situated at the membranous portion of the urethra.

There was an unusual number of cases of pack-thread stricture located in the straight portion of the urethra, generally at a point midway between the meatus and scrotum.

The history of each case was uniformly the same—and as follows: During a violent paroxysm of chordee occurring in connection with gonorrhœa, the urethra was snapped, as it were, at that point, considerable haemorrhage ensuing; and the contraction attending cicatrisation producing that form of obstruction which resembles somewhat the same that would be produced by a ligature.

The plan of treatment resorted to in all of the cases of organic stricture was that of gradual dilatation—metallic, conical-pointed bougies being the instruments used. They were always carefully introduced into the stricture at intervals of every second day; under no circumstances was violence resorted to to overcome the obstruction. This mode of treatment gave us the most satisfactory results.

In several cases sudden engorgement of strictures of long standing had taken place, thus blocking up the passage and forcing them into the hospital for relief. Tartar emetic combined with a moderate quantity of morphia given at intervals of every hour until gentle nausea ensued, and then a warm hip-bath to each case enabled the patient to evacuate the bladder. Had this treatment not have succeeded, or had the patient not been seen until the bladder had become so severely distended as not to admit of delay, puncturing the bladder above the pubis would have been preferred to using violence in effecting an entrance

through the urethra, unless perchance the case was known to be one in which the stricture had become semi-cartilaginous in character, with but little sensibility, in which event a strong silver catheter might have been thrust through.

In some of the cases where the stricture was found to be very tight,—more especially the pack-thread stricture,—Holt's dilator was used to great advantage.

It was not employed for the purpose of rupturing, but gently insinuated through the stricture and its blades only expanded so far as to make healthful pressure. Rupturing was, under all circumstances, deprecated. In certain old cases of tough semi-cartilaginous insensible strictures this plan might be adopted, but the proportion of cases to which, in our experience, it can be applied with safety is exceedingly small, and even these cases to give any permanent result, have to be subjected to the subsequent use of bougies. A large number of our cases were of long standing, and had been under treatment at various periods for some time previous to admission into the hospital. Some had had the stricture ruptured, others had been subjected to the operation of internal division, others to the perineal section. Having passed safely through the respective dangers of these operations, they had either fancied themselves cured, or had been so assured, and relinquished all further treatment. The lacerated or divided parts as a matter of course, healed, and in healing contracted, leaving the sufferer as bad, if not worse, than before. These were our worst and most unmanageable cases. It may be they were at first cases as nearly as possible fitted for those operations, and the operations skilfully performed, but the subsequent use of instruments so indispensably necessary being neglected, whatever benefits might have been secured were lost to them. Several of the cases were complicated with urinary fistulæ. In two, it was the result of the perineal section—the subsequent introduction of bougies being overlooked; in the others the urethra had given way behind the stricture, allowing a moderate escape of urine, which was followed by circumscribed inflammation and the perineal abscess. It was found that these fistulæ generally healed so soon as the natural calibre of the urethra was established and the urine allowed to flow unobstructedly from the bladder. No

attempt to block them up until this was accomplished, was ever attempted. When they were found to continue, though no urine escaped, such means were taken to destroy the epithelium with which their walls are lined, as would be resorted to in an ordinary sinus.

Hydroceles were treated with unvarying success by the injection of pure undiluted comp. tinct. iodine. Where the tumor was large, containing considerable fluid, it was at first simply tapped, the injection being used when it had regained about half its former size. This was done in order that the iodine might come in contact with every portion of the walls of the sac, which is considered as essential to success. After the tincture is thrown in, a thorough kneading of the scrotum should be practised to render its complete diffusion the more certain.

This plan of treatment was most earnestly advocated in preference to all others, as being more safe, attended with but little suffering, and rarely, if ever, failing to prove efficacious.

Fistulæ in ano were treated by the knife; especial pains being taken to find the original opening in the bowel, and not to make one, which latter is quite an easy matter. We have had cases that had been previously operated upon without relief,—the ill success certainly depended upon carelessness in this respect. It is sometimes difficult to find the opening into the bowel, owing to the fistulous tract being very tortuous, but a cultivated finger generally can detect the internal opening—revealed as it is by a slightly elevated and indurated point, and by enlarging the external orifice, so as to give freer play to the probe or director, no trouble is experienced in discovering the right place. Where there were several external openings, through which wind and faecal matter escaped, as was frequently the case, the one bearing the most directly to the one opening in the bowel was selected, and the rest generally healed of themselves as the cause of their existence was removed by the operation. When they did not do so, and little pockets, as it were, formed around, they were either stimulated to excite granulations or else slit up and made to fill from the bottom.

There were several cases of what is termed mucous tubercles. The little elevations were situated between the nates, around the

verge of the anus, and some extended to the sides of the scrotum. They were not, as is generally advocated, considered as essentially connected with syphilitic taint. In fact, there was only one of the cases who had ever had syphilis, and he was at the time suffering severely from the secondary form of the disease. The exact cause of them cannot be definitely explained. In all probability, in those that have no specific origin, they are due to uncleanliness, which leads to diseased action on the part of the follicles so thickly studding those parts.

Where they were looked upon as simply local, the parts were kept scrupulously clean, and well washed two or three times a day, with the "yellow wash," or else a solution of one grain hydrarg. bi-chlor. to the ounce of water. It was surprising to witness how rapidly they disappeared under this application. If it were made out to be specific the same application was made, and such general treatment as the circumstances of the case seemed to require.

Our cases of cancer were proportionately in larger number than usual, and, with two exceptions, were of the hard variety, and appeared in the female breast. They were all operated upon, and so far as we have been able to follow them up, there has been no return of the disease, except in one case, in which it is feared that the lung has become implicated. In each case the axillary glands were severely affected, and this point renders their consideration one of great practical interest and importance.

It has been generally considered that all operative measures should be avoided when this implication occurred, and the patient was left to die a painfully lingering death, or if operated on it was with ill success. That the prognosis in such cases is rendered somewhat more unfavorable is not denied, but the idea that it precludes the use of the knife is not at all entertained. Cancers, even of the same variety, vary in degree of malignancy, generally manifested by the rapidity of growth and the degree of cachexia produced. The rejection of these cases must rest with the individual judgment of the surgeon. In such, perhaps, interference with the knife might not be judicious, only causing greater suffering and hastening the fatal termination. But where the tumor has not progressed with very great rapidity, and espe-

cially seems to be in a measure circumscribed—not diffused through the tissues—and the malignant cachexia but moderate—excision is always advocated in spite of any infection of the glands, and with a pretty fair promise of its not returning, if certain directions to be presently mentioned be scrupulously followed. Each and every one of the glands were carefully removed—a task by no means easy, as they lie bedded down upon the large axillary vessels, requiring a most careful dissection to detach them. This removal of the glands is highly important.

Some time ago, a case of scirrhous breast came under observation that had been already operated upon—but imperfectly. In the first place the tumor in the breast had not been cleanly removed, and again the glands which were involved were left. The operation was performed, the entire breast removed, and most of the axillary glands. One or two that appeared quite healthy were not touched—at that time it not being considered necessary. It was not long, however before they began to give every evidence of being affected, and a second operation became necessary for their complete removal. Since that time there has been no return of the disease, and hopes are very strong that it will not.

In the worst case which was operated on before the Class, after having dug out what was thought to be all of the glands, a careful search revealed one more deeply situated, of about the natural size, and to the eye and touch, perfectly healthy. However, remembering the case just cited above, it was not thought prudent to allow it to remain, so it shared the fate of the rest. On cutting into it, there, sure enough, was found cancerous matter deposited in its centre, not much, but distinctly recognizable. Had it been left the consequences are easily to be guessed at.

Now, as to the after management of the patient—an item we look upon as of great importance. In the cancerous diathesis there is an exuberance of life, an excessive activity of cell-formation, being the very opposite of the tuberculous diathesis where everything falls still-born, as it were. In view of this, strict attention should be paid to diet. Where, in the tuberculous subject the richest, most nourishing food would be recommended, in the cancerous, the mildest, most bland would be in-

sisted upon. It is not so much the quantity taken as it is the quality.

We placed the patients upon bland, succulent vegetables, and of all preferred corn, green corn when procurable, corn-meal also, and forbid meat and all high seasoning. It was remarkable to observe how this course agreed with them in every respect. One of the cases, the worst to all appearances we had, was seen a few days ago, nine months since the operation. She had been very faithful in following directions,—had not tasted meat of any kind. Having a garden of her own, she was enabled to keep constantly on hand a good supply of vegetables, and lived exclusively upon them. She asserted that she had never felt better in her life—that she felt lighter, more active, and was able to do twice the work than ever before. She was confidant and cheerful, and intends to continue faithful in following direction. There was no evidence of any return of the disease, and it is believed that there will not be.

The other cases of cancer were epithelial in character, appearing in the one case upon the ear and involving a portion of the cheek; in the other, upon the leg. In the first, excision was impracticable, and the treatment consisted in the same dietetic regulations above mentioned, and the occasional application of a paste of chloride of zinc, which seemed to repress very materially its growth, and also a tolerably strong wash of acetic acid which he found to alleviate his pains very much.

In the second case the limb was amputated below the knee, and the patient is now enjoying very good health. The circular operation was performed. This method is preferred to all others below the knee as giving a much better stump than any other. There have been at various periods several cases that had had the flap operation performed, upon whom secondary amputation had to be resorted to for the relief of painful and ulcerated stump, due to the constant traction produced by the twitching of the large muscles of the calf of the leg.

There was only one other amputation performed, that was of the thigh, and for compound fracture of the femur, just above the knee. The-antero-posterior flap operation was the one chosen. The patient was not seen for some considerable time after the re-

ceipt of the injury, and was almost worn out. However, with great attention to all the points connected with the operation, and with watchful care over his subsequent management, he made a rapid recovery. By giving him a stimulant several minutes before administering chloroform, and then just as he was coming under its influence administering an enema containing half a drachm of carb. ammonia, and having the artery so controlled as to prevent active hæmorrhage, the shock of the operator was so mitigated as scarcely to amount to anything,—in point of fact he left the amphitheatre with a much better pulse than when placed on the operating table. Every means being then taken to cultivate his stomach, he soon began to nourish well, and it was surprising to notice how rapidly he gained in flesh. It is this strict attention to these apparently small items, both during the operation and subsequent to it, which constitutes the success in all cases of grave operations, more especially in those subjects that have had all of the resources of nature almost completely drained by extensive suppuration and long-continued suffering. Under such circumstances it takes so little to turn the balance unfavorably, that any unwariness, even in connection with what might appear trivial, involves loss of life.

Where compression for the stoppage of hæmorrhage was found to be advisable, it was done in the following manner: Removing any clots that might have formed, and with a dry sponge or piece of linen firmly applied to the wound and quickly withdrawn, it is dried and the exact point whence the bleeding comes is easily determined. Then with a probe, the end of a strip of lint is carried directly upon the cut end of the vessel and doubled upon itself, until it protrudes somewhat from the wound. Gentle pressure is then made upon the base of this cone of lint, either by means of a bandage, or a strip of adhesive plaster. The two essential points to be observed are these, viz: the exact application of the lint to the bleeding point and the graduation of the pressure which should not be too great. It is this application of too much force in making compression which in most of cases renders it unsuccessful. By the exercise of this undue pressure, the very process upon which depends the permanent arrest of hæmorrhage are interfered with,—those processes being the exu-

dation of lymph especially around the bleeding orifice and subsequent granulation to fill up the wound. This is generally more apt to be done when compression is made about the head where unresisting bone facilitates the matter. The placing of the lint immediately upon the orifice of the bleeding vessel is of equal importance. The mere careless stuffing of the wound leading to the bleeding vessel cannot accomplish the desired object. It may stop the haemorrhage for the time, but it is almost sure to return. By fixing the lint accurately, the clot which naturally forms in the vessel, acting as a plug, is gently supported until lymph is thrown out around, effecting permanent relief.

There were four or five cases of fractured femur and two of the humerus, and several of the ribs. The fractures of the femur were, with one exception, all below the upper third, simple and oblique. In some, Liston's splint, modified by the foot-piece, was used. The extension was made by means of adhesive plaster, applied to the leg and attached to the foot-piece which stands horizontally, at right angles to the splint, counter-extension being exerted by means of a perineal band. The result was very satisfactory, there being but little shortening—not enough to produce perceptible lameness. The others were treated with the pulley and weight, and with equal satisfaction. This apparatus was found to enable the patient to rest with much more ease and comfort than the other, but it has its disadvantages in common with all other devices. It was found difficult to keep the patient from sliding down in bed, thus relieving the limb from all extension. In those, however, who are intelligent and careful, and do not imagine that because they have placed themselves under the surgeon's care, they have to do nothing to assist themselves, there should not be much difficulty experienced unless, perhaps, during sleep.

In the one case of fracture high up, just below the trochanter, Smith's anterior splint was used, and, as there was a great disposition to shortening, to make certain of a sufficient degree of extension, strips of adhesive plaster were attached to the thigh, and these made to join a cord which passed over a pulley wheel so placed as to have the extending force in a line parallel with the

fractured bone. The result was equally as satisfactory as in the others.

In these fractures of the femur, the limb was not placed immediately in the apparatus, unless, perhaps, the patient, from intoxication or other cause was unruly or excessively restless. It was generally laid upon a double incline plane of pillows, and the patient instructed to place himself in a position to him the most comfortable. An opiate, if necessary, given to secure rest at night. About the third or fourth day, the splint appropriate to the case was applied. By thus allowing the excessive tenderness, swelling, etc., produced by the violence of the injury, to subside, we were able to handle the limb, with scarcely any pain to the patient, and he was enabled to bear the splint with but little discomfort. Importance is attached to these little items—they exercise quite an influence for good over the ultimate result. In the fractures of the humerus a simple paste-board splint was applied to the outer aspect of the limb, the chest generally answering the purpose of an inner splint,—the mere weight of the arm producing sufficient extension. In one of the cases it was found necessary to apply an inner splint, he was nervous and excitable, and could not keep the limb quiet.

Fractures of the ribs were managed on a very simple plan. A broad strip of adhesive plaster was applied firmly around the chest and allowed to remain until union was accomplished.

There was one case of ununited fracture treated. This occurred in a seaman aged about forty years. He had had both bones of the leg fractured about two months previous to admission into the hospital, while on ship-board. The voyage was a rough and tedious one, and he did not receive that proper attention which his condition required.

On examination it was found that the tibia had been fractured obliquely, and furthermore, split upwards the distance of an inch and a half. The fibula was broken a little higher up, and bore evidence of having been somewhat comminuted. There was no union whatever, but there yet remained some tenderness about the parts, which is always looked upon as influencing favorably the prognosis.

The limb was tied up in a pillow stuffed with moss, wooden

splints being placed on each side, and a small blister placed immediately over the point of fracture. The effect of the blister was, according to his description, to produce very nearly the same tenderness which he had experienced soon after the receipt of the injury. A succession of blisters was kept up for several weeks, when it was found that considerable union had taken place. A starch bandage was then applied, and allowed to remain ten or twelve days. On removing it, the fracture was found to have still further consolidated, but not sufficiently so, and another application of blisters was ordered. He left the hospital shortly afterwards with tolerably firm union and every prospect of its increasing in strength. Too much value cannot be attached to the use of blisters in procuring union in fractures. All of our cases are watched with care, and if union does not take place at the proper time, recourse is had to them, while attention is paid to the general health. Several cases of much longer standing than the one just cited, have been at various times treated in this manner with the most gratifying results.

Hæmorrhoids were uniformly ligated, when an operation became necessary. It is looked upon as far superior to any other procedure. It was rarely found necessary to apply more than three ligatures—at the utmost four—even to the largest. Having taken pains to have the piles well protruded, the most prominent were seized with a pair of ordinary dressing forceps and well drawn down,—the ligature was then cast around as high up as possible. It was only the little vascular tumor occupying the centre of the ring of swollen, engorged tissue which generally exists in cases of long standing that were included in the ligature. Everything else subsided as the ligatures performed their duty. There is scarcely any operation in surgery which affords more certain and palpable relief.

The pain at the time of operating is as a rule bearable, and the subsequent suffering amounts to but little, especially if the ligatures are drawn very tight, which should always be done.

There was but one case of inflammation of the bladder,—and that was chronic—the result of gonorrhœa. He was treated as follows: Every second day from four to six ounces of a solution of two grains of tannin and one drop of nitric acid to the ounce

of water were injected by means of an ordinary catheter into the bladder and allowed to remain as long as he was enabled to retain it. His urine was carefully tested from day to day, and such simple means as were calculated to maintain it in as bland a condition as possible were resorted to. If excessively acid alkalies combined with some soothing medicine were administered; and if alkaline, some of the acids.

Much can be done towards securing that proper state of the urine so desirable in this trouble, by directing special attention to the digestive function; and this point should never be neglected. It was observed in this very case, that when at times the bladder was progressing finely, all at once it would have a set back, which when traced up was always found to have originated in some indiscretion which had upset the stomach, interfering with digestion, and of course in this way influencing the urine. The bladder, even when laboring under this chronic inflammation will, under properly directed treatment, commence very soon to tolerate the presence of urine coming in its natural healthy state from the kidneys, but it revolts at the slightest variation either one way or the other.

The same thing has been observed in ulceration of the lower bowel—which, while in progress of cure, will bear with ease the passage of faecal matter, which is the refuse of healthily digested food, but rejects the same with violence if coming to it as the castings off of a function improperly performed. Great value is placed upon the use of medicated injections into the bladder, and of all the solution of tannin and nitric acid is preferred. Labarraque's solution of chlorinated soda, largely diluted, has also been used with benefit. The injection should always be used tepid warm, and thrown in slowly in such quantities as the bladder bears comfortably. There was not much pain accompanying it.

In tapping the abdomen for ascites, or an ovarian cyst, the linea semilunaris was always chosen for the introduction of the trocar, in preference to the linea alba. By selecting this place superior advantages are secured. In the first place the walls of the abdomen are thinner at that point—less freely supplied with nerves and no blood vessels of any consequence, and then, besides, the patient is enabled to keep a horizontal position while the

fluid is gradually flowing out, which, as can be readily recognized is quite an acquisition for him.

The exact place selected was a point about midway of a line drawn from the anterior superior spinous process of the ilium to the umbilicus—a little variation either one way or the other is immaterial. In operating for the relief of phymosis, either congenital or otherwise, the following method was employed: The skin was slit longitudinally on each side of the penis, with a bistoury or pair of scissors, to a sufficient extent, then retracted, and the exposed inner membrane divided in the same direction, so as to completely expose the glans penis. There is no difficulty in maintaining the prepuce in this state of retraction, and when the wound has healed, especially in children, little if any marks of the operation are left.

This method of operating is preferred to any other.

In all operations where an anæsthetic was required chloroform was used—being considered, if properly used, safe.

It is believed that the effects of this agent are much less deleterious to the system than ether. It is true that patients have been killed by chloroform, and it is equally true that none have been directly by ether, but it is quite certain that they have subsequently died from its disturbing effects when they would have been quite safe under the judicious use of chloroform.

Both of these agents, as well as the nitrous oxide gas, produce intoxication not differing materially except in their respective potency. It is easier to kill with the salts of opium than with opium itself, but this is no argument against them. It is probable that many persons have been killed or had their lives shortened by most of the potent remedies that are in common use, but this fact furnishes no good reason for abandoning them, as they are known to be highly valuable when judiciously administered. Chloroform in the hands of many is often used recklessly, and in many instances it is surprising that deaths have not occurred from this imprudent use of it.

This reckless use of chloroform is neither science, nor justice to a most invaluable agent, and, still further, a most dangerous tampering with the patient's life.

It is true that deaths have occurred before any great quantity

had been inhaled, but these are peculiar cases, and it does seem that by the exercise of a little judgment the condition of such cases should be very correctly estimated before its administration.

We are in the habit of giving a stiff toddy of brandy or whisky several minutes before administering the chloroform, so that it may absorb during the time of inhalation. This not only serves to keep up safe action of the heart, but the patients seem to go under its influence much better than without it. An ounce or two of brandy was generally given by the stomach if there was nothing to contraindicate it—and, if so, a half drachm dose of carb. ammonia by enema. This latter was always easily retained, and when given just as the patient began to become insensible, it was gratifying to observe feeble subjects come from the operating table after having passed through a severe ordeal with a better pulse and better general condition than when he went on it.

A napkin folded into the shape of a funnel was always preferred to any other apparatus for the inhalation of chloroform.

It possesses the merit of being fresh and clean, which is not the case with the mechanical devices, which are in daily use in hospitals. As much chloroform as was thought necessary to place the patient under its influence, was poured upon the towel so as to avoid the necessity of stopping to renew it. As soon as the patient began to inhale freely, it was pushed rapidly upon him, so as to secure the desired effect with the least amount of the anaesthetic. It has been noticed that the longer the time taken to put the patient under the influence of chloroform the more it takes, and the more the nervous system suffers. The man who intoxicates himself in the course of an hour suffers much less damage than he who occupies days in arriving at that result. The analogy can be readily recognized. The patient is always carefully watched by the operator, and as soon as he seems to be insensible the knife is placed at the point where the incision is to be begun, and with a little pressure and a slight drawing motion, it is readily determinated if complete insensibility has been obtained—if not, a little time is taken,—until the patient does not shrink from the knife. Where the operation is prolonged, and the patient gives evidence of pain, a little more

chloroform secures insensibility, and, in this way can be kept up any required length of time with perfect impunity.

Where we could, chloroform was always administered on an empty stomach—though nothing more serious can follow if given after eating than severe nausea and vomiting, which otherwise is not likely to occur.

The cases in which the use of chloroform might involve some danger are very few, and the condition under which these subjects are generally laboring at the time may be resolved mainly into one, viz: want of nerve force, however brought about.

From the after effects of over stimulation, prolonged mental or physical suffering, with the free use of opiates, and in some cases where grave operations have previously been performed, the patient in some instances does not recover well. The nerve power seems to have been exhausted to a degree whence complete restoration of its wonted vigor is difficult if not impossible of attainment. Under these circumstances the case would be considered as somewhat unfavorable for the use of chloroform, but by stimulating a little more freely, and giving the chloroform with great caution—watching more especially the respiration—the patient, if the operation is one involving much pain, is considered as being given the best chance for life with its administration than without it.

Certain subjects, whose nervous system has been drained by the causes just cited, or who naturally have no vigor, would sink under a capital operation merely from pain or fright without chloroform. The number of deaths occurring on the operating table before the discovery and use of chloroform, far outnumbers those imputed to this agent.

The great danger that is generally recognized as accompanying the use of chloroform in lung and heart disease is looked upon as purely theoretical.

Caution is always observed in recommending it in valvular disease of the heart, for if a patient once experiences the relief it generally gives in this distressing affection, he is not likely to give it up, but to use even more than contributes to his comfort.

In some cases chloroform may be mixed with the equal parts of alcohol.

This manner of using it is especially applicable where it is desirable to quiet and ease a patient suffering from painful and incurable disease, and also in puerperal convulsions, where it becomes necessary to keep the patient under its influence for a length of time. In this way the subject gets enough chloroform for the purpose of ease; the stimulating effects of the alcohol seems to act favorably; he does not become stupefied—on the contrary, the mental faculties are often maintained under the free use of it.

V *Review of a Treatise on Hæmorrhagic Malarial Fever, published in the July Number of this Journal, and Written by DR. R. F. MICHEL, of Montgomery, Ala. By J. C. FAGET, D. M. P., Author of "Etudes sur les Bases de la Science Médicale et Exposition Sommaire de la Doctrine Traditionnelle." "Etude Médicale de quelques Question Importantes pour la Louisiane, et Exposé succinct d'une Endémie Paludéene de form Catarrhal." "Memoires et Lettres sur la Fièvre Jaune et le Fièvre Paludéene," etc.*

I.—*Hæmorrhagic Malarial Fever. — History.*

WE congratulate our confrères of Alabama, and in particular Dr. Michel, of Montgomery, for their very interesting communications on *Hæmorrhagic Malarial Fever*, but we are astonished at the double error they commit. According to them, firstly, it is a "new disease," and, secondly, "it is a fever peculiar to the southern part of the United States." Since learned physicians have erred on this point, it becomes necessary to look into the history of this fever, which I propose to do in this first article.

At the commencement of his history of hæmorrhagic malarial fever, Dr. Michel expresses himself thus (page 402): "We find no record of it up to the year 1867, and consequently must begin the history of the malady by inviting attention to a paper published in the March Number of the New Orleans Medical and Surgical Journal, for 1867. The next reference to this disease is found in the April Number of the Richmond Medical Journal, for 1868."

At New Orleans, in 1864, I published "Memoires and Letters,"

whose second division bore the title of “Hæmorrhagic Paludal Fever.” Again, in 1859, I had already published a treatise which contained an abridged history of this fever, and in particular of its hæmaturic form. My various Pamphlets, it is true, were written in the French language, and for this simple reason, they have remained unknown to our American confrères. I accept then with gratefulness the kindness of my friend, Dr. J. W. Wiedahl, who will translate the present article for the New Orleans Journal of Medicine.

Here are a few extracts taken from my work of 1859. “The borders of the Danube which present many analogies with those of the Mississippi, with regard to its medical topography, especially in approaching towards its mouth, is also the field, at the end of the warm season, of fevers sufficiently similar to our own; their type is the quotidian or double-tertian; their form the biliary; *jaundice and black urine* appear from the first paroxysms; difficulty of respiration, delirium, gastric and ataxo-adynamic accidents appear with the following paroxysms: increase of size of the liver and swelling of the spleen are its anatomical lesions. . . Such is the hemitritæa of the Danubian Provinces, this other paludal climate, with hot and humid season, adds Dr. Dutrouleau.” (P. 375.)

As we perceive, it is to Dutrouleau, former physician in chief of the French marine, that I have borrowed these first historical facts. They are published in two books of the “Archives Générales de Médecine,” those of October and November, 1858. It is also to him, that I owe the following, on this same hæmorrhagic malarial fever, of biliary hæmaturic form, appearing at Madagascar, Cayenne, and in the West Indies.

1st. Madagascar. Here follows the description of a jaundiced paroxysm at Madagascar, by Dr. Lebeau:

“The scene is opened by a chill; it is followed by vomitings of the green color of arseniate of copper; to the vomitings are often added stools of the same nature; I have seen patients rendering blood by this passage. Sometimes also the vomit has a black color, a color which the urine partakes of, the green tint being so deep-set that it resembles ink. Reaction soon takes place, and lasts about twenty hours. When the remission takes place, an

icterical suffusion is spread over the whole body, which becomes of a deep orange-hue. (P. 388.)

Anatomical lesions.—Softening of the gastric mucous membranes, alteration of the color of the liver, which presents the general yellow cast of the other tissues, spleen hypertrophied." (P. 389.)

"Two other observers, Gélineau and Guilasse, insist upon the importance and danger of the passive haemorrhages, particularly of the haematuria and epistaxis, which are very rebellious in these fevers." (P. 393.)

"Guilasse describes a yellow paroxysm with intermittent type, and a yellow continuous paroxysm, one syncopal, and one soporous." (P. 393.)

"Finally, Daullé, after a long residence at Mayotte, chose as the subject of his inaugural theme, in 1857; this very fever of Madagascar, which he calls Pernicious Icteric. "It assumes," says he, "the three paludal types of fever, oftener however intermittent than remittent, and seldom continuous." (P. 395.)

In 1851 an occurrence took place in Guianna bearing much analogy to what has been observed since 1853 in the parishes of Louisiana, and in the epidemic of yellow fever at Cayenne in 1850.

"But we must come to the end of 1851, to the transportation of European convicts in Guianna, to the increase of the European population, and its dissemination at various points of the plains or borders of rivers, which are all intense hot-beds of paludal emanations, to observe the reappearance of fevers of a grave type."

Here are a few extracts from the reports of the physician in chief, Dr. Laure, from 1851 to 1853: "The sick have almost invariably from the first day, a continued fever, with delirium, irregularity of pulse, jaundice, urine scarce, yellow, bloody, in a word the symptoms of the yellow disease (icteric pernicious fever of Madagascar) ignored until to day, and a great deal more fatal than the epidemic of yellow fever of 1850."

"The icterus," observed Dr. Laure, "attains its highest degree; the urine and stools contain a great quantity of black blood, and yellow materials ascertained by analysis. There exist petechiæ and sudamina."

Laure considers malarial intoxication as the first and essential

cause of the disease which he has observed, and nevertheless, remarks: "The action of quinine is so doubtful that we do not know whether rational treatment is not deserving of consideration in the cures." (P. 402.) In truth, we read at page 403:

"It is by the evacuants, emeto-cathartics firstly, then by the sulphate of quinine that this fever has been met."

Finally, let us learn what Dutrouleau says with regard to what occurs in the West Indies, concerning certain grave fevers, of malarial origin evidently, with pseudo-continuous type, with icterical form, becoming complicated with passive hæmorrhages, in particular with the hæmaturic form more than with the hæmatemetic.

This is what Dutrouleau says:—"It is only in miasmatic localities, where grave types of the severe malarial fever prevail, that we meet with the severe bilious fever." (P. 403.) "We meet with intermittent or remittent types, and with the continued types." . . (P. 403.) Then follows the description of the intermittent type.

"In the continued form, which is also the most serious, the bilious symptoms do not appear at the offset, but only after a period of thirty-six to forty-eight hours, characterized by an inflammatory period; then the jaundice and bilious excretions become apparent, but less marked than in the intermittent form. The *urine is always bloody*, but in a less degree than in the intermittent form; epistaxis sometimes occurs, and traces of blood are found in the stools and vomits. Some observers say they have met the *real black vomit of yellow fever*; I have never met it. The cerebral phenomena are always prominent in this form. Sometimes we have but excitement and slight delirium, complicated with anxiety and trouble of the respiration, but sometimes also there exists ataxic symptoms of an extremely violent nature."

"Such is the fever which the physicians of Point à Pitre, where it is more prevalent than elsewhere, have named "*Bilious hæmaturic fever*," "*yellow fever of the acclimated and of the creoles*." When it is of some duration, it assumes at times the mask of typhoid fever. It is subject to relapses, and ends by bringing the patient to a *cachexia*." (P. 404.)

"From 1828 to 1838, a period of immunity from yellow fever, Dr. Lherminier, whose name is authority at Guadaloupe, has fre-

quently met it with the creoles, concurrently with the other forms of pernicious fever. He also classed it amongst the malarial fevers, rather than with yellow fever, notwithstanding its symptoms of affinity with this last disease." (P. 405.)

These few brief extracts are amply sufficient to prove that the hæmorrhagic malarial fever, even in its variety, *Bilious hæmaturic*, that which was observed in Alabama, first, *is not a new disease*, and, secondly, *is not peculiar to the Southern part of the United States*.

However, the merit of Dr. Michel is only the more enhanced, since though the disease was new to him, he, nevertheless, at its first observation, recognized its malarial nature. In terminating his treatise he exclaims, not without some enthusiasm (p. 424): "Cure, by the administration of proper doses of quinine, your intermittent fevers, and you stop, and stop forever, this horrible malady." But he has not yet had the opportunity of observing it in all its forms; and moreover, probably, they may never all appear in his field of particular observation, for they are very numerous. He only mentions types of quotidian, tertian, and quartan, as well as remittent (p. 409); whilst, as we have observed, our confrères of the French Colonies, of Madagascar, Cayenne, and the West Indies, have met also the continued type of hæmorrhagic malarial fever. Nor has Dr. Michel met with the type which in science is called *febris larva*, (or masked fever); but one of his young confrères, of the same State, seems to have met it, and, as is right, refuses to recognize it even as a malarial hæmorrhagic fever. Dr. Riggs, in the April (1869) No. of this Journal, proposes a brilliant *theory* of the new affection, and, necessarily, a new name, Purpuræmia. "*Malarial hæmorrhagic fever* is a too lengthy and erroneous name," he writes, (p. 242, of April No., 1869): "I do not believe it to be essentially a fever, the febrile action . . . in many cases not existing at all. I have known attacks of this fever to be so light that the sufferer did not take his bed; merely looked yellow and voided red urine." Notwithstanding, at the preceding page, 241, Dr. Riggs had said: "Purpuræmia then is due to malarial poison."

What a Protean is this malarial poison! Our young confrère of Selma, shows it to us here under the form of a simple hæma-

turia; in the number for April, 1869, of the same Journal, Dr. Sharp of Natchez had recognized it under the title of "intermittent icteroid fever" (246, April, 1869); and Dr. Michel, in the number for July, points it out under these two forms at the same time, the bilious and hæmaturic combined! (p. 405.) "The most prominent symptoms are the yellow color and the hæmaturia."

Well! all this is nothing but the *bilious hæmaturic fever*, a simple variety of the hæmorrhagic malarial fever.

In this fever, this fever which the physicians of the French Colonies have called the GREAT ENDEMIC of warm countries, the tendency to hæmorrhage is great, is general; but for each form and variety, the particular or principal point wherein the hæmorrhage develops itself changes with the latitude in which it is observed.

In Alabama, as at Madagascar, at Cayenne, and in the West Indies, the bladder is the seat of election of the hæmorrhage; but in all these countries, other organs also have been the seat of the bloody flux: "Dr. Osborn mentions, in case first, slight oozing of blood from the gums and fauces. . . . Dr. Weatherly speaks of severe and protracted hæmorrhage from the nose. . . . We have all witnessed the bloody serum which exudes from the blistered surfaces," adds Dr. Michel.

Moreover, we have heard from Dr. Laure, that at Cayenne, "the urine and the evacuations contained a large quantity of black blood, and that there are petechiæ. Nor is this all; Dr. Dutrouleau has taught us that at Guadaloupe, epistaxis and traces of blood in the *stools* and *vomitings* are sometimes observed; some observers, he adds, say that they have seen the real black vomit of yellow fever; this has never occurred in my observations."

It is impossible not to be struck by this last remark. Here then we have a fever with a general hæmorrhagic tendency, a fever in which at the same time, continued emesis constitutes one of the principal symptoms of the disease, and in which, notwithstanding, the hæmorrhagic flux seems to avoid the stomach to choose the bladder.

Dr. Michel, with judgment, has been careful to insist upon this singular phenomenon. "No; we have no blood here, no trace

of hæmorrhage from the stomach ; and I would like to disabuse the public mind from any supposition which would create the belief that the vomit in this disease resembles the black vomit of yellow fever in the remotest possible manner. The patient vomits dark grumous bile." (P. 407)

At New Orleans, things take quite an opposite direction. In our hæmorrhagic malarial fever, the hæmorrhage which I have met the most often, is that of the stomach, but in the most incontestable manner, recognizable to the naked eye, by every one, and in all its shades, from the grumous of the color of chocolate to the clots of blood, sometimes yet red, sometimes already blackened by the acids of the stomach, to the grumous black coffee grounds, resembling perfectly genuine black vomit of yellow fever. And, when I speak of large clots of blood, still red, let no one imagine that I then saw blood coming from the nasal fossæ or from the gums, swallowed, and, afterward, ejected before undergoing the influence of the acid of the gastric juice. By no means. I beg that I may have the credit of examining things closely, and that I may not be charged with having committed an error of so grave a character.

Then, it is by such facts, patiently collected, without interruption, for the past seventeen years, in all seasons (even in winter,) in the midst, as well as *outside* of epidemics of yellow fever, *facts of gastric hæmorrhage*, being produced in the course of fevers of all malarial types, from the larval to the exacerbating type, in passing by the intermittent, remittent, sub-intrant and pseudo-continued, that I have been able to recognize the existence of the *hæmatemesic variety* of hæmorrhagic malarial fever. Further on we will come to the history of this hæmatemesic variety observed in New Orleans.

But, before proceeding further, it is indispensable, that I should draw attention to another essential point in the history of hæmorrhagic malarial fever. All physicians who have written until now, upon this subject, seem to have met but the bilious form of this fever; also the physicians of the French Colonies call them simply Grave bilious fevers.

At New Orleans, on the contrary, it is not the *bilious* form of hæmorrhagic malarial fever which is the most common ; it is the

mucous form. We think it necessary to say a few words here with regard to the history of this mucous form of hæmorrhagic malarial fever, which we might call *Grave* mucous fever ; for whilst in the West Indies it is the hæmaturic variety of the *Grave* bilious which was described, at New Orleans it is the *haematemesio* variety of the *Grave* mucous which I have met most often, particularly amongst children. Our warm climate, in the highest degree humid and variable at New Orleans, on account, no doubt, of the intimate relations which exist between the cutaneous envelop and the mucous membranes, causes the catarrhal or mucous type of fevers to be very prevalent. Thus, whilst in other warm countries, the superabundance of the biliary secretion in certain fevers is such that we may say with the energetic expression of Dr. Joynes, that bile is there deluging the body, at New Orleans, it is the entire mucous surface which is as if submerged in its proper secretion, during the course of certain fevers. And whilst in bilious fevers, it is in the liver that we discover a very marked congestive and hypertrophied state, in mucous fevers, on the contrary, it is in the muciparous crypts, especially in the gastro-intestinal mucous membranes, that we find such a congested and hypertrophied state : these muciparous crypts appear with the naked eye where in a normal state they are visible by only the means of the microscope ; for instance, in the stomach.

Here is what we read, in the chapter on the anatomical lesions, page 46, of my pamphlet of 1859 : "I made five autopsies of children at the Orphan Asylum. In these the spleen was manifestly hypertrophied ; in a child of ten years, it was five inches in length, three and two-third inches in breadth ; in another of six years, four and one third inches in length and two inches in width. In four the liver presented only a few yellow spots ; in the fifth it showed the yellow degeneration in the whole thickness of its substance, asserted to be characteristic of yellow fever, and nevertheless, this last case was undoubtedly a case of the foudroyant pernicious paroxysms : from health to death, did not intervene a whole day. The intestinal mucous membrane was softened almost to a jelly, from the pylorus to the cœcum, with confluent folliculous eruption. In these five corpses, what struck me the most, was the state of the muciparous crypts throughout the

whole extent of the digestive tube ; there, where none are found in the normal state, they existed in great quantity, in the form of a confluent eruption, in particular upon certain points of the stomach and duodenum. The quantity of mucus secreted by these hypertrophied follicular crypts, was astonishing ; over several points of the gastric mucous membrane, this mucus was spread in concrete layers, in such a manner, that after having lightly scraped it with the back of the scalpel, I thought that I had removed the mucous membrane itself ; such was not the case however ; in scraping again, I removed new layers of mucus, beneath which I finally discovered the mucous membrane, often having a normal consistence."

In my pamphlet of 1864, I enter further in the details, page 65 of the last memoir :

" Stomach. The liquid contained in the stomach was variable. It was a brownish liquid, or bottle-green, or chocolate, or entirely black, having allowed the settling of a heavy mass of mucus, and holding in suspension black clots, quite recognizable for small clots of black blood darkened by the acids of the stomach. A similar liquid of brownish hue, thrown up during life, constitutes what most of our brethren call *black vomit*."

" Finally, the mucus being scrapped off, what arrested our attention was the appearance of the mucous follicles of the stomach, that I have never met but in autopsies of that disease."

And page 67. "*Duodenum*.—In the first part of the duodenum, the *folliculous eruption*, was still more manifest, and never was absent ; there it was a true eruption always confluent, the mucus coat which covered it was thickened and adherent."

" *The small intestines* ; whilst we explored them downwards, the folliculous eruptions became more discreet ; and we met no longer any but a few isolated follicles of a more and more rosy hue."

Formerly interne of the hospitals of Paris, I have surely assisted at many autopsies of true typhoid fever, particularly in the service of Gendrin, and I had never met anything of the kind. I then thought that it was something new ; I had forgotten the old adage : NIL SUB SOLE NOVUM. In fact, I had only afterwards to read the treatise : *De MORBO Mucoso*, of Röderer and Wagler, to

find, minutely described, the congestive and hypertrophied alterations of the muciparous crypts of the stomach and duodenum which I have just pointed out.

However, when we study attentively this celebrated Treatise *De Morbo Mucoso*, composed after the siege of Göttingen, in 1762, we come to the conclusion that the disease observed there was a mixture of typhus and malarious poisoning. Considered in this light, and not in that of *the typhoid fever of Paris*, the *Tractatus De Morbo Mucoso* is strikingly true.

However it may be, in spite of the dysenteric, scorbutic and petechial complications which were developed, during the very complex endemo-epidemic of the siege of Göttingen, it is incontestable, that the hæmorrhagic element has not manifested itself; especially hæmorrhage by the bladder or stomach does not seem to have been observed. If then we must recognize in the fever of Göttingen, of 1762, a mucous malarial influence, complicated with typhus, it is difficult to connect this epidemic with the hæmorrhagic malarial fever of which we have given the history. On the contrary, nothing is more striking than the connections which exist between our hæmorrhagic malarial fever of mucous form and the New Disease described in the 1st volume of Aitken, by the name of *Typho-malarial fever*. (Page 509.) "This form of fever attracted attention first in 1862 as the *Chicahominy fever*, from its prevalence in the army of the Potomac at that time, but has since been common whenever our armies operated in malarious regions, in men saturated with paludal poison. . . . The name *typho-malarial* was proposed and first used by Dr. J. J. Woodward, U. S. A., ("Outlines of the Chief Camp Diseases of the United States armies, 1863.")

1stly, this new fever, the *Chicahominy fever*, to which, Aitken thinks, that the physicians of the armies up North first drew attention in 1862, had however been observed in persons saturated with paludal poison; it is then truly a malarial fever.

2dly. This *Chicahominy fever*, this true type of paludal fever, is moreover a real *mucous fever*, in the classical meaning of the word, *i. e.*,—presenting as the characteristic anatomical lesion, not an alteration of the agminated glands, nor the glands of Peyer, which is the pathognomonic feature of the *typhoid fever of Paris*,

but a lesion of the *isolated follicles*, or solitary stands called *follicles of Brunner*, which is the pathognomonic feature of the *mucous fever* of Roederer and Wagler, observed at Göttingen. Here is the proof of this second proposition, page 510. "*Anatomical Characters. The characteristic lesion is the enlargement of the solitary follicles of the small intestines. . . . The patches of Peyer are generally unaltered, though they may be congested, . . . and the individual follicles forming the agminate patch is the seat of a pigment deposit giving the "shaven-beard" look or "bluish-black tatooing." . . . This appearance of shaven-beard, was sometimes presented to me by the folliculous eruption at the great cul-de-sac of the stomach, in my autopsies at the Orphan Asylum.* (See page 66 of my monograph on the *haematemetic variety* of the *Grave mucous fever*, 1864.)

3dly. This *Chicahominy fever* deserves to be classed as an *haemorrhagic fever*. "Purpuric blotches, or petechial spots, with *haemorrhage* from the bowels, gums, mouth, and nostrils, and all the phenomena of a low form of fever set in." . . .

Still more; black vomit, genuine black vomit, was established in the *Chicahominy fever*; "matter resembling coffee grounds is sometimes vomited towards the last." (Page 510. Aitken.)

Here is then quite certainly our *haematemetic variety* of the *paludal mucous fever*, a variety itself of the *haemorrhagic malarial fever*, of which we have traced a rapid historical sketch. Only, as its name indicates, in the *typho-malarial fever* observed in 1862 on the marshy borders of the *Chicahominy* of Virginia, in the camps, in the midst of the encumbrances and the privations of war, the *typhus element* was as intensely marked as it was in the *mucous fever* of Göttingen, in the midst of the siege of 1762. On the contrary, the *typhus complication* is absolutely absent in our *mucous haematemetic fever* of New Orleans, which remains thus a pure *haemorrhagic malarial fever*.

But I hear the objection which will be made here: This *haematemetic fever* that you wish to attach to the *haemorrhagic malarial fever*, is *yellow fever*. This is an unavoidable objection; we must meet it before hand.

Did we not perceive that at Guadalupe an extreme tendency was manifested to shoulder the *haematuric bilious fever* upon yellow

fever itself? This opinion was so strong that, at *Pointe-à-Pitre*, it was named *yellow fever of the Creoles* and of the acclimated. "It is there," says Mr. Dutrouleau (p. 79 of my pamphlet of 1859), "that it obtained the name of '*yellow fever of the acclimated and of the Creoles*,' an appellation which would establish an identity of nature with the genuine yellow fever which does not exist, as it behooves to well establish." But, if the *haematuric variety of the hæmorrhagic malarial fever* was confused with yellow fever, how could its *haematemetic variety have escaped*?

Who can deny but that black vomit was considered a characteristic of yellow fever? It was owing to this that yellow fever has often been called *black vomit*. For instance, if you wish to read one of the best articles on yellow fever, it is in the excellent Medical *Dictionary* of Copland (1859) that you will find it. But under what denomination must you seek it? Under that of yellow fever? Not at all. It is under the word *Pestilence*, and qualified by the adjective *haemagastrie*, that you must look for. But *haemagastrie* is evidently the equivalent of *haematemesis*. Then, as synomyms for yellow fever everywhere, you will find the expressions . . . *vomito-nigro*, *black vomit*.

Happily science has progressed. Aitken (SCIENCE AND PRACTICE OF MEDICINE—1866,) in his section 2d, treats of *continued fevers*, and together, with typhoid, typhus, and relapsing fevers, he places yellow fever. His section 3d is devoted to fevers which he calls *littoral, malarial or paludal*, and there he describes successively the *intermittent, remittent, and typho-malarial fevers*, and finally *malarious yellow fever*. But see how he defines this last. (P. 511.) "Febrile phenomena due to *malaria*, in which the exacerbation and remission are so connected that the fever resembles a *continued fever*, and is characterized by great intensity of headache, *yellowness of the skin and black vomit*."

The cause of the absolute and fundamental separation of malarious yellow fever, from genuine yellow fever are thus decisive.

P. 453. "*Pathology and Symptoms*."—(Yellow fever must now be regarded from an enlightened consideration of its history, as one *sui-generis* and specifically different from remittent and intermittent fevers, or any other form of *malarious fever*.) (Cullen,

Chisholm, Blane, Wood).! But, if another fever, where the febrile movement *resembles the continued*, where there is *yellowness of the skin*, where there is even *black vomit*, must be separated from real yellow fever, for this reason only that this other fever is a *malaria* or *paludal*, why not separate from the yellow fever another *malaria* or *paludal* fever which has no similarity with yellow fever but the black vomit, *without continuity* of febrile action and *without jaundice*? For such is the *hæmatemesic malarial fever*.

History of this Hæmatemesic Fever at New Orleans.—We will now say a few words concerning the history of the *malaria hæmatemesic fever*, such as was observed at New Orleans.

The first published case that I find, is in “an account of the yellow fever at New Orleans, in the year 1848,” by Fechner.

“August 8th.—I saw Dr. Picton to-day, who told me he had been called last night in consultation with Dr. Davezac, to see a daughter of Mr. Noble, aged six years, and found her throwing up *black vomit*. Dr. D. had been attending her *five* or *six* days for what he supposed was an *intermittent fever*. He did not suspect yellow fever till last evening. She died in the course of the night. This little girl was a *native of New Orleans*, but had been absent the last two years in Ohio.” It is well to note that from 1847 to 1853, there was no epidemic of yellow fever at New Orleans, and consequently there was none in 1848.

With regard to this fact, here is what I remarked at page 33 of my pamphlet of 1859.

Recapitulation of the fact.—“A creole child of the city, white, aged six years, has an *intermittent fever* during six days; during the night of the sixth day, she *throws up black vomit* and dies. Surely, instead of an *intermittent*, it was *yellow fever* that she had, although her physician until then had not the least cause of suspicion.”

It would be difficult to bring up a better example to prove that black vomit was lately considered by some as an infallible sign of yellow fever; I did not then establish a useless fact in the two first propositions of my pamphlet of 1859.

Personally, although I have practiced medicine in New Orleans since the spring of 1845, and since 1847 my clients have been

sufficiently numerous, particularly amongst the creole population, it was in 1853 that I first observed black vomit amongst children. In that year, I saw much more than in the succeeding years, but did not keep an account of the number. I saw a very few in 1854; in 1855, I saw eleven; in 1856, three, and finally, in 1857, one only in my private practice, and about fifteen, at least, at the Orphan Asylum, during the prevalence, *intra muros*, of a catarrhal fever of a most remarkable nature.

Thus, these black vomits have never been considered by me as signs of yellow fever. I have looked upon them simply as symptoms of malarial fevers of a more or less grave nature, and, consequently, I have met them by the administration of the sulphate of quinine.

The reason why I thought that these black vomitings of children did not appertain to yellow fever, was that I did not believe that young children were subject to yellow fever; and I was led afterwards to treat them as symptoms of paludal fever, from the fact that the courses of those fevers pointed out their nature. Besides; this treatment has succeeded remarkably in my hands. During the four years, between 1853 to 1858, I lost but one child, in my practice, out of fifteen at least, who had black vomit. This child lived in the suburbs of the city, and time was lost by a purgative being given first. Quinine was administered too late, and retained badly; it is thus that I have been able to account (to myself) for this sole bad result. Such a result removes all idea of yellow fever; for we know that its cure is not the rule, and that black vomit having once set in, the cure is a rare exception.

During the epidemic of yellow fever of 1858 I saw such a number of cases of the *mucous paludal haematemetic fever*, that I thought it a duty to publish my pamphlet of 1859, of which one of the main objects was to show that the epidemic of yellow fever of 1858 was complicated with a paludal endemic fever of catarrhal or mucous form. To be convinced, it would suffice to read the title of that pamphlet—(*a Medical Enquiry*—etc., and *Succint History of a Paludal Endemic of Catarrhal form* which prevailed at New Orleans, particularly among the children, during the *Epidemic of Yellow Fever of 1858.*)

Yellow fever and the malarial mucous hæmatemesic fever were then prevalent in 1858, *at the same time*, as in 1853 and 1867. But in 1858 there was an intermission of *two months* between the appearance of the two fevers, *i.e.*,—of the *epidemic* and of the *endemic*. The first cases of yellow fever had appeared at the centre of the port, at the end of May; at the end of June, and especially in July, yellow fever prevailed *epidemically* in the central or French locality, whilst the superior portion of the city was not epidemically infected. About the 15th of August, the waters of the immense crevasses which for three months covered the right banks of the river, in front of the city, had commenced to recede, and withdrew rapidly; and it was then, and only then, that the cases of *malarial hæmatemesic fever* began to appear, when we may well say that this exploded at the same time in all the wards, in both the upper and the lower portions of the city.

As we are all aware, the two months wherein paludal fevers are more prevalent on the banks of the Mississippi, are the months of August and September; but, when yellow fever comes to New Orleans, it is uncommon that it be not in all its force in August and September; formerly, these two months were its months of predilection.

What is observed here with regard to the simultaneous appearance of yellow fever and of the *mucous hæmatemesic*, is then precisely what is seen in the West Indies, relatively to the coexistence of yellow fever and of the *bilious hæmaturie*. We have already read what Dr. Dutrouleau has written:

“The *bilious hæmaturie* fever of the West Indies . . . scarce ever prevails but at the period of the endemic pernicious fevers of all forms, and is however observed a little oftener *in the creoles*, during the *epidemics of yellow fever which attacked the Europeans*.”

But, it will be perceived that, for New Orleans, I bring forward facts of which no trace is found in the *Memoirs* of the two historians of our epidemics, during the last twenty years, Drs. Fenner and Deléry. The explanation is quite simple.

Dr. Fenner had adopted the opinion of the *identity of nature* of yellow fever and of paludal fevers; and, as we have seen, to him *black vomit* was characteristic of yellow fever. He admitted then an *intermittent yellow fever*, as well as a remittent and a con-

tinued; to him the type depended upon the season and the temperature; to his mind there existed but a difference of degree between an intermittent fever and yellow fever.

Dr. Deléry did not clearly express himself on the question of *identity of nature*. But his two Memoirs, on the epidemics of 1858 and 1867, are specially intended to prove that during these two epidemics, yellow fever alone prevailed at New Orleans and in the parishes. The titles of his two Memoirs indicate this. Nevertheless, in the pamphlet of 1859, he gives under the title of *yellow fever*, nine observations collected in the State prison; and, his ninth commencing from the 11th of November, is an observation of a case of *simple intermittent fever* even without *black vomit*. To be convinced of this, one needs only read it at page 112. As symptoms of yellow fever, we should be satisfied in this ninth case, with a *white border* (*liseré blanc*) of the *gums*, and a certain amount of *albumen in the urine*.

But if our confrère attributes to *yellow fever*, cases evidently of *simple intermittent fever*, even without *black vomit*, with more propriety he should also attach to that disease *intermittent fevers connected with black vomit*. He did not fail to do so. For instance, during the epidemic of 1867, being by accident called to one of my little patients, J. Montreuil, who *vomited black*, after five or six days of a *clearly delineated intermittent fever*, he pronounced that it was *a case of yellow fever*. But much more; it was *a case of recurrence*: this boy born in 1856, had during the epidemic of 1858 already undergone a first *intermittent fever*, with *black vomit*, and, *thanks to quinine*, he was cured; and he got well again, in 1867, in spite of the *black vomit* concurrent with *intermittent fever*, and *thanks again to quinine*.

After such facts, we understand why our two historians of the great epidemics of New Orleans from 1847 to 1867, *saw nothing but yellow fever*.

During the interval of all these epidemics, consequently in the absolute absence of yellow fever, even during the coldest months of winter, we are continually meeting cases of the *paludal hæmatemesic fever*, more particularly those of the *intermittent and remittent types*.

Since the again mixed epidemic of 1867, the same occurrences have been taking place, and even this year, 1869, in the month

of August, we have as yet had but one authentic case of yellow fever in New Orleans, this one undoubtedly of Havanian importation, whilst cases of *paludal hæmatemesic*, *i. e.*, cases of *malarial fever with black vomit*, have not been scarce ; I have seen two, and Dr. Turpin has met six from the month of March to July.

Certainly this year, as usual, although public health continues in general to be good, cases of *paludal fevers of all forms*, even with pernicious or congestive accidents, are becoming more and more numerous, as we approach towards the month of September. I have just met with two cases, without notable febrile reaction, but also with remarkable *ataxic phenomena*; the one with Dr. Gaudet, the other with Dr Wiendahl.

Summary.—1stly.—*The haemorrhagic malarial fever* presents itself to observation, under various forms or varieties, according to the countries or cities wherein it is studied; two of its most remarkable varieties are the *bilious hæmaturic fever* and the *mucous hæmatemesic fever*.

2dly.—The *bilious hæmaturic fever*, perfectly defined and classified, for more than twenty-five years, by the physicians of the French colonies (Madagascar, Cayenne and the West Indies) has only for a few years, been the object of interesting study to the physicians of the southern part of the United States, Alabama, Mississippi, and Louisiana at Pointe Coupee.

3dly.—The *mucous hæmatemesic fever*, noticed at New Orleans since 1848, has been studied separately from yellow fever only since 1853; whilst the analogies of the *hæmaturic malarial fever* with the true yellow fever were sufficient, in the West Indies, to cause it to be called *yellow fever of the creoles and the acclimated*, the similarities of the *hæmatemesic malarial fever*, to this same *true yellow fever* were so deceiving at New Orleans that the great majority of the physicians saw in them, but one identical fever, the yellow fever.

4thly.—Nevertheless, the genuine yellow fever being certainly foreign to *malarial* or *paludal poison*, it becomes obligatory to us to separate and to class apart from it the varieties of the Paludal or Malarial fevers, which simulate it so much by their *haemorrhagic symptoms*, the *bilious hæmaturic* and the *mucous hæmatemesic fever*.

CORRESPONDENCE.

An Answer to certain portions of Dr. Van Buren's Lecture on Spermatorrhœa.

NEW ORLEANS, August 25th, 1869.

*Messrs. Editors,—*The following extract is from a lecture delivered by Professor W. H. Van Buren, to a Medical Class in Bellevue Hospital Medical College and published in the New York Medical Gazette, of July, 10 :

“Masturbation is a subject that cannot escape attention in connection with the ætiology of this so-called spermatorrhœa ; but I have very little to say upon it. There is no doubt about the generality of the practice ; as little doubt, I think, that it is less harmful to the physique of the individual than to his *morale*. It does its harm to the man’s self-respect, by giving him daily proof that his head cannot hold the preëminence that belongs to it. It destroys his manliness, his higher qualities, in this way, and that is the reason the young man cannot look you in the face. That the practice is physically hurtful I am not prepared to admit. I have never seen any very striking evidence of it except this so-called spermatorrhœa, which I have told you is a disease of function and of the mind rather than of the body. There is no question that this habit has a vast deal to do with spermatorrhœa. But on the other hand, in our Southern States, in old times, I have seen many an instance where a boy has gratified himself, in the natural way, from the earliest dawning of the sexual appetite, even before puberty ; and I have seen much more harm come from excesses of this kind than from masturbation. And, moreover, I have seen bad effects from masturbation, even where there was free access to the natural gratification among the slaves. The difference between the *morale* of the Southern young men and that of the Northern was very marked in the days when our medical classes were divided about equally between them ; and from the many examples I have seen of the peculiar effect of the “peculiar institution” upon the white race, I think we have nothing to regret in its loss. Similar conclusions might be drawn from the social status in oriental countries, where the young male, inclined to yield to temptation, has the means of indulgence freely open to him.”

If I have properly apprehended this paragraph, it contains three different propositions. First, that Masturbation is not “physically hurtful.” Second, that before the abolition of slavery, Southern young men indulged the sexual passion with

their negroes so universally, and to such an extent, that the lecturer's medical classes exhibited a marked difference in "morale" between students from the South and those from the North. (By implication, the Northern students are supposed to have been addicted to masturbation with equal universality, and perhaps to an equally excessive degree.) Third: that by the abolition of the "peculiar institution," the "young male" of the South is deprived of opportunities to gratify the sexual passion in a natural way, and consequently has a different morale—perhaps an improved "morale," from having adopted that "peculiar institution," which, if not absolutely countenanced by the lecturers' teachings, is certainly not positively condemned by them.

To entitle the first proposition to any hold upon our confidence, it will be necessary to expunge from medical records the thousands of cases of insanity, epilepsy, and marasmus collated throughout long intervals of time by the most intelligent and honest observers of our profession, and, according to the best data they could obtain, chargeable to masturbation. Some old-fashioned people who have not kept pace with the "human progress" of the North, attach some weight to the instance recorded in an old-fashioned book, in which the offended Deity made death the penalty of masturbation. But what is this example worth when tested by the light of modern philosophy? Is it not equally true that the same Deity demanded the life of a man who had sequestered for personal use valuables obtained in war? But we must not therefore conclude that stealing is an occupation calculated to injure one's health. We have men occupying places of preferment in this country, whose food is thoroughly digested and whose ample forms are well nourished by it, although it may have been eaten with stolen spoons. Why should the disciples of Onan be punished while the imitators of Achas enjoy immunity from either punishment or dishonor?

The connexion between masturbation as a habit and disturbed health as a result, is too common and uniform to justify any other conclusions than, that the vice bears a causal relation to the subsequent disease, however little able we may be to trace either its perversions of physiology or its morbid anatomy.

I confess myself not very well versed in the literature of diseases of the reproductive organs, and I may be mistaken in my opinion that Professor Van Buren has precious few supporters among medical writers or medical teachers. It would look very much like an effort to found a new-ism, perhaps to be called "Rousseau-ism," did not the high position of this teacher contravene such an idea.

With regard to the second proposition, the lecturer merely repeats by implication, the old slander that all slaveholders made mistresses of their female slaves. Unquestionably, many southern youths availed themselves of the ever-ready complacency of negro wenches, but from all I can learn, their opportunities for sexual indulgence, even among this lascivious race, were not more numerous, and certainly not so tempting, as those which young men are obliged to confront in very many northern communities. The lecturer says of his own people that "ninety-nine out of a hundred men that you meet upon Broadway are bent upon business connected directly or indirectly with sexual desire." Such deplorable degradation could not exist with one sex without sensibly lowering the sentiment and deportment of the other. That such is certainly the fact, the reports of infanticide coming from every part of their territory, plainly indicate. Moreover, here we personally know, that but for the over-liberal largesses of erring sisters annually shipped from the North, the houses of prostitution in this city would lack for inmates. When the "Evening Star" went down, the waves of the sea closed over a single installment of forty of these frail creatures, whose pious parents had probably been so much occupied in teaching them their Beecher—Stowe-isms, and such like offshoots of puritanism so "peculiar" to the North, that they quite forgot to inculcate lessons of modesty or virtue.

I think the Doctor is certainly mistaken in that part of this second proposition which supposes that excessive sexual indulgence was ever more common among Southern than Northern youths. I presume that while lecturing, he contrasted the diminutive and sallow-skinned Southerner, with the broad-shouldered, ruddy faced Northerner, and fell into the grievous error of supposing that the poor fellows from the South had given

all their strength to women—negro women at that—when in reality, it was malaria and their long hot summers which had interfered with their physical development. If he had lived long in this climate he would have become convinced that the sexual furor which seems to pervade the North, and dove-tails so grotesquely with their many other phases of insanity, can never subject our population so completely to its influence. The rule of Sirius is adverse to that of Venus, if no better reason prevailed. Those men of his acquaintance “ who have had connexion with their wives every night for forty years, except during the monthly flow,” did not spene their beastly lives in this region.

The third proposition is scarcely worthy of notice. If the Professor, or any of his friends, think the negro less licentious now than formerly, or in any manner improved in his morals by his change of status, they are singularly obtuse to the current testimony going up from every part of the country.

But, Messrs. Editors, I should not have felt that it was necessary or proper to notice this lecture, which after all may have been designed more to fill up an odd hour, or to gratify the prurienty of young men than to instruct, were it not that I consider it due to ourselves and to scientific truth to point out and repel the slanders so constantly and gratuitously heaped upon us by Northern writers and teachers. A lecture is delivered on spermatorrhœa, and the “peculiar institution” is exhumed and its ghastly skeleton—a skeleton in the lecturer’s own family now as well as ours—is made to contribute to the strange entertainment. It does not seem to matter much upon what subject the unmitigated Yankee is employing his pen, he finds, or forces, an opportunity to indulge his illiberal propensities by some distasteful and generally unjust fling at the South. As if afraid to trust his future reputation to the historian proper, he disfigures scientific annals by irrelevant interpolations, either designed to vindicate himself or to cast a slur upon those who differ with him.

It is high time that science was purged of these incongruous sectionalisms, and made to stand upon its own proper basis—
broad, catholic truth.

VINDEX.

[The following letter is of peculiar interest, we therefore published it with the remarks of the committee appointed by the Medical Association of New Orleans to thoroughly examine the specimen. EDS.]

CITY OF JEFFERSON, LA., April 24th, 1869. ✓

PROF. SAM'L. LOGAN.—DEAR SIR: I send you, for your examination and disposal, a deformed foetus, which is perhaps one of the most curious and remarkable on record.

It is a male child at full term, having the heart, liver, and spleen external to the abdominal parieties; and those viscera were evidently mainly developed in their abnormal position; for, the cleft in the abdomen shows only a deficiency of development in the integumentary covering, and is entirely too small to have admitted hernia or extrusion of so large a liver, except at a very early period of embryonic life. And again; the serous membrane covering those viscera is not the peritoneum, but it is ocularly demonstrated to be the tubular sheath of the amnion, which, after covering the placental vessels forming the cord, is continued to the liver, and from thence is reflected over the liver, heart, and spleen, when it loses itself in the integument of the body. And, tco, if it were a rupture—solution of contiguity of tissue by force—this would be palpable, but it is evident that the cleft is the result of a deficiency of integument as this is nowhere torn. I emphasize this point because the question, “Is it possible it can be a rupture?” presented itself to me.

The caul or covering of the external viscera was ruptured after the feet were born by the unavoidable traction of the child upon the cord, while the shoulders and head were being extruded, the cord not being more than four inches long; and that rent commenced at the entrance of the cord into the liver.

The liver is large, cone-shaped, and rests upon the umbilical point with its base looking towards the symphysis pubis, and its apex towards the chin but a little obliquely to the left.

The cord was attached to the superior right lateral surface of the liver, covered by the proper sheath of the amnion and integument, and was tied about two inches from its entrance into that organ, leaving about two inches to the placenta. The placenta was otherwise normal.

The portal and hepatic circulation seem to be normal and complete. The umbilical vein enters the integument on the right side of the mesial line of the child's body, passes upward under the skin, and enters the superior lateral posterior surface of the liver. The two hypogastric arteries are felt uniting into one arterial trunk at the umbilical point; and this trunk is continued under the integument upward, and to the right for two and a half inches, when it joins the umbilical vein, becomes ensheathed in its covering, and proceeds to the placenta.

The ascending vena cava emerges from the body of the child near the umbilical point, passes under the skin, and left posterior surface of the liver, and reaches the right auricle in normal position. The ascending cava, pulmonary arteries, and pulmonary veins, and the aorta, hold the heart upon the thoracic integument over the second, third, fourth, and fifth ribs, and their spaces, in nearly normal position, except that the heart is external to the thoracic walls.

Just below the heart on the left side, is the cleft through which the stomach, and two knuckles of small intestine are visible.

The child's position in utero when I first saw the case, it having been under the care of a midwife, was the occiput at the left sacro iliac junetion, and the feet at the right, lying directly across the maternal pelvis. On introducing my hand, the tumor, which was afterwards found to be the liver, was presenting through a well dilated os. Continuing my exploration, I distinguished the hands folded on the body of a foetus; and still continuing, I soon found the knees and feet; and my diagnosis having been formed upon these data, I performed version by the feet, and the child was speedily born. The tumor offered some obstruction, but the head the most, until its diameters were properly adapted to the maternal passages.

There was a muscular excitation and struggle as if the child would gasp, but it did not breathe.

The systolic and dyastolic actions of the auricles, and of the left ventricle continued one hour and thirty minutes. I am not able to say whether the right ventricle had either systole or dyastole, but I believe that it had not; its motion seemed to be but the result of a rebounding force. I saw the aorta moving

synchronously with the heart, sending its blood through the subclavian, and carotids of the left side.

It is evident that the heart's actions were but the continuation of the intra-uterine or fœtal life of the child, the Eustachian valve remaining patent, and the foramen ovale unclosed, the arterial blood from the ascending vena cava continued to pass directly from the right to the left auricle, and thus sustained intra-uterine or fœtal life for one hour and a half after the child was born. This fact, which I aver, and which I had an intelligent druggist, Mr. G. J. Mattingly, of this city, to witness, is certainly one of the most curious on record.

The tumor on the left side of the neck, which I at first thought to be congenital curviture of the spine, was proven by an incision made into it to be only infiltrated condensed cellular substance.

Five days from birth the mother has not had an unfavorable symptom, and will soon be well.

Hoping sir, that you may be able to preserve the specimen, and that it may be worth something to science as well as prove interesting as a curiosity.

I am respectfully your friend,

U. R. MILNER, M. D.

NEW ORLEANS, May 26th 1869,

*Report of the Committee of the Medical Association of New Orleans
Appointed to Examine, and Report upon the Specimen of Visceral
Ectropion, Presented by DR. S. LOGAN, with the letter of DR.
U. R. MILNER, of Jefferson City, concerning it.*

YOUR Committee beg leave to report as follows: We find but little to add to the interesting account embodied in the letter of Dr. Milner, which is hereto appended. All the statements descriptive of the specimen we find confirmed by the careful examination of the same; and on the whole we are inclined to endorse the physiological views expressed by him.

Upon carefully examining the membrane covering the misplaced organs, which is seen to be continuous on the one hand with the skin of the fœtus at the margin, where the arrest of development occurs, and on the other with the covering of the cord, and which the Doctor considers a prolongation of the

amnion, we find that three quite distinct layers may be demonstrated. The innermost of these layers is continuous over the pericardium with the pleura above and the parietal peritoneum below. The diaphragm is deficient in its anterior half, and the heart and liver are only separated by the pericardium and the hepatic layer of peritoneum. Upon turning up the liver from its position, as it rests against the skin of the hypogastric region, about four or five convolutions of small intestine, from the jejunal portion of the canal, are found, with a corresponding portion of mesentery, to also occupy a position outside of the cavity of the abdomen.

The lungs have evidently never been distended with air; upon section, they present a dense granular appearance of about the same consistence as that of the spleen, but the organs generally are somewhat hardened by the alcohol in which the specimen has been preserved.

The foetus, in all respects, except as has been indicated in Dr. Milner's letter, and the foregoing portion of this report, is well developed, and has apparently been borne to the full term of utero-gestation.

All of which is hereby respectfully submitted.

SAMUEL LOGAN, M. D., *Chairman.*

H. D. SCHMIDT, M. D.

W. S. MITCHELL, M. D.

J. H. WIENDAHL, M. D.

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Cephalic Version. A Shoulder Presentation Converted into a Left Occipito-Iliac ; by the Postural Method.

JASPER, TEXAS, May 24th, 1869.

PROF. D. W. BRICKELL.—*Dear Sir:* In compliance with your request that members of the Class report to you, cases of obstetric interest coming under their observation, I submit the following: April 1st, four o'clock, A. M., I arrived at the bedside of Silva—colored—who had fallen in labor, as the midwife in attendance informed me, the morning previous. The membranes ruptured spontaneously; at nine o'clock, P. M., succeeded

by severe but ineffectual expulsive efforts. An examination revealed the right hand protruding beyond the vulva, and further inquiry determined the case to be a presentation of the right shoulder, the head resting in the right iliac fossa, belly of the child, therefore, to the front. Having the proper hand introduced, I readily seized a foot, thinking to effect podalic version, but in this I was utterly foiled by the excessive irritability of the womb ; to the slightest movement of my hand the organ responded by a spasmotic grasp, so that after persevering for half an hour, I resigned all hope of success by the usual method of turning, and bethought me at once of the postural treatment, revived by Dr. Gaillard Thomas in the reduction of the funis, and dwelt upon by you as invaluable in a more extended class of difficulties. Placing my patient upon her knees, her breast touching the bed, I re-introduced my hand and quietly waited a few moments, when I felt the womb gently relaxing, and with its contents gravitating towards the diaphragm.

Presently I found the impaction so relieved that I was enabled to return the arm by sweeping it over the breast, and then, gently pressing the shoulder from the superior strait, I passed my hand on toward the right iliac fossa, grasped the head, and brought it down, engaging it with the occiput to the left acetabulum. The patient now being made to lie on her side, *the uterus* at once began to contract, and in a little while the birth was complete. The child was born somewhat asphyxiated, but this was relieved by the ordinary measures. The placenta, I immediately delivered, and thus brought the labor to a speedy close.

Permit me, sir, to close this letter with an expression of my sincere wishes for your good health and prosperity.

Sincerely your pupil, T. M. STONE.

HERNANDO, Miss., July 10, 1867.

DR. W. S. MITCHELL; Sir,—Last September, I was called to a case that puzzled me no little, never having seen one similar to it before ; I am now satisfied, after reading Dr. Michel's communication in the July No. of the Journal, that it was a genuine

case of hæmorrhagic malarial fever. The symptoms, as described by him, were present. As stated by him on page 405 of the Journal, the urine was discharged in large quantities, and without pain, the discharge consisting of more blood than urine. As the case recovered, I send this communication giving treatment. I did not keep a specified note of the case, but the principal treatment was with calomel, opium and quinine. I am satisfied that a blister over the stomach and liver effected nothing. Diarrhoea was present. As a tonic, during convalescence, I used Elixir Calisaya.

Respectfully,

L. H. HALL, M. D.

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Hæmaturia caused by the internal use of Sulphate of Quinine : By TH. CACHERÈ, M. D. Opelousas, La.

BILLY Fox, aged 13 years, had several paroxysms of chills and fever. Quinine was prescribed by the parents on two occasions, which was followed immediately (both times) by hæmorrhage from the mucous membrane of the urinary organs. I was called (August, 1867) to see the boy, and, contrary to the mother's wish, I prescribed ten grains of quinine, to be divided in three doses, and to be given next day, with orders to suspend the medicine, if he should have another attack of the hæmorrhage.

An hour after the third dose had been administered, the patient had a profuse hæmorrhage from the urinary passages.

I advised the parents to dispense with quinine altogether, and prescribed other febrifuge. My little patient was removed to Opelousas, where medical attendance could be obtained at any hour, in case of emergency. An eminent physician of that town was called in to attend to the boy, and again quinine was prescribed and administered, and followed by the same kind of hæmorrhage. He got well after a severe spell of typhoid fever.

The boy is again under my treatment, suffering with chills and fever (tertian). Two weeks ago, his father prescribed and administered three or four doses of an infusion of *cinchona* and Virginia snakeroot, which was followed by hæmorrhage of same organs.

It has been my misfortune to have had another similar case to treat last Fall. To a little girl seven years old, quinine was administered in different ways, but was invariably followed by haemorrhage of the urinray passages.

CLINICAL RECORD.

COLLATED BY S. S. HERRICK, M. D.

Selections from the Eye Clinic of the Charity Hospital. Service of PROF. MITCHELL. Reported by Jos. F. JOOR, Ward Student.

CASE I.—*Granular Conjunctivitis (Mixed Variety—STELLWAG); Vascular Pannus—Treatment—Applications of Carbolic Acid and Division of the Supra-Orbital Nerve—Cure.*—T. M. H., aged thirty-two, native of Ala., country merchant, admitted into Charity Hospital, April 13th, 1869.

Some four or five years previously to admission, he had had an attack of ophthalmia, from which he has never entirely recovered. A year after this he had traumatic erysipelas of the head and face; since this, eyes have grown progressively worse.

Has suffered with repeated attacks of frontal neuralgia for the past eighteen or twenty months.

In both eyes the palpebral and ocular conjunctivæ are much injected, the palpebral presenting large, well defined granulations of the mixed variety, the papillæ were much enlarged, at the same time that the peculiar sago-like vesicles (the true granulations) were very apparent. The cornea of both eyes is almost in a complete condition of vascular pannus. The condition of opacity of the cornea prevents the exact state of the iris from being perceived, but it is presumed, from the absence of lachrymation and photophobia, to be normal. Vision is very imperfect, can see a person standing before him, but can neither distinguish features, nor recognize colors, is useless for any practical purpose. Left eye presents all the symptoms in greater intensity than the right.

R	Argent, nitr.....	gr. iv.
	Aq. dist.....	ʒi. M.
	S. Drop freely in both eyes.	

April 15.—Has a severe attack of neuralgia.

R	Morph. sulph.....	gr. $\frac{1}{4}$.
	S. At once.	

April 17.—General conditon of the eyes improving, the neuralgia has disappeared, and to prevent its recurrence, Prof. M. ordered :

R Ferri ferro cyanuret.....
 Quiniæ sulph.....aa. Dij. M.
 Fiat pil. No. xl. S. One three times daily. Continue collyrium.

20th.—Former treatment was continued with the addition of a careful application to the lids of :

R Acid carbolici, crys.....ʒi
 Glycerine, qs. aa. ad. sol.....
 Aq.....ʒi. M.

In making this recipe of so great strength of carbolic acid, Prof. M. stated that although carbolic acid had been highly lauded of late in the medical journals everywhere, he had found it to be of little benefit, save as a cauterant, and that as such he had seen much good follow its use. Carefully used, it excites, after a few applications, a mild grade of purulent ophthalmia, by which the granulations are absorbed. Used in any other way, he had always found the smallest proportion in solution irritating, and by no means equal in value to the mild astringents, such as sulph. zinc and sulph. of copper.

22d, 24th, 26th.—Treatment continued with slight improvement in the condition of the eyes.

29th.—Has another severe attack of neuralgia; this lasted with little or no abatement until May 15th. The condition of the eyes was now as bad, if not worse, than at date of entry. The treatment was continued with the exception of replacing the collyrium of argt. nitr. by the following :

R Hydrag ox. rub.....gr. iv.
 Cerate simp.....ʒi. M.
 Put a small portion in the eyes three times daily.

May 6.—Slight amelioration of symptoms.

7th.—Another attack of severe neuralgia, for the first time experienced acute pain in the eyes themselves, the pain being most severe on left side. Can just distinguish light.

8th.—The left supra-orbital nerve was divided, and a portion of it excised.

10th.—Some ecymosis of upper lid, otherwise doing very well.

From this time he rapidly recovered from the effects of the operation without a single untoward symptom.

27th.—Right eye much better than at any time since date of entry, vision in left still dim, but the general condition of that eye much improved both as to the vascularity of cornea and the granulations. The 60-grain solution of carbolic acid applied as before.

This treatment was continued every alternate day to June 5th.

June 8th.—With right eye can read Jaeger No. 8 type at the normal distance. Very slight vascularity of ocular conjunctiva; cornea nearly clear, the pannus being confined entirely to periphery. Vascularity of left cornea much diminished. Can read with left eye, Jaeger No. 19 a foot distant. Granulations scarcely perceptible on either eye-lid. Neuralgia has not recurred on either

side since the operation. The only indication for treatment being now the removal of the remaining pannus, the following was ordered—

R Hydrag. Ox flavi.....gr. v,
Cerate Simp..... $\frac{3}{4}$ i. M.

S. A small portion to be put in both eyes two or three times a day.

9th.—Patient left the hospital, condition as above.

N. B. It will be observed that the condition of the eyes varied pari passu with the severity of the neuralgic paroxysms.

CASE II.—*Granular Ophthalmia with Phlyctenulae—Recovery.*—W. D. S., farmer, aged 26, native of Alabama, admitted April 23, 1869. About four years ago had an attack of catarrhal ophthalmia, from the effects of which his eyes have never thoroughly recovered, and during the past year have been getting worse; three months ago, however, they were worse than at present.

About six weeks since, a phlyctenula appeared on left cornea, which gradually passed into an ulcer; the same thing in a few days occurred with right. His general health is by no means good, its decline being imputed by the patient to an attack of intermittent fever twelve years since. He is weak and anaemic, with some enlargement of the spleen. Has never suffered with frontal neuralgia.

The conjunctivæ are very vascular, palpebral covered with florid granulations. There is a large superficial ulcer on the left cornea, and a smaller one on the right—cornea generally presenting a peculiar ground glass opacity. Considerable lachrymation and photophobia. Vision confined to a mere perception of large objects.

R Acid Carbolici.....gtt. i,
Glycerine.....gtt. ij,
Aq. dist..... $\frac{3}{4}$ i. M.
Drop freely in the eyes.

Application of a 10-grain sol. argt. nitr. to be made to the everted lids once daily.

R Hydrag. Bi-Chlor.....gr. i,
Tinct. Gentian Co..... $\frac{3}{4}$ vi. M.
S. Tablespoonful three times daily. Rich and nutritious diet.

May 3d.—Above treatment has been continued to date; condition of eyes improved. Ulcer on right cornea a mere point, that on left much reduced in size. There is a slight improvement in the amount of vision. Treatment continued.

27th.—Granulations have almost entirely disappeared; ulcer on right cornea has entirely healed without leaving the slightest opaque trace.

June 9th.—Granulations reduced to a few small red spots. Ulcer on left side not larger than a small pin's head. A slight degree of photophobia yet remains. Can now read any, save the smallest type, with ease. Discharged.

CASE III.—*Double Capsulo-Lenticular (soft) Cataract, Linear*

Operation---Recovery.—J. G., aged 14, native of La., could gain but little of his previous history further than that he has been blind almost of infancy. (Dr. M. stated that he had seen two brothers of the patient who were similarly affected, and that two years ago he had successfully operated on one of them.) The Prof. stated that although it could not be said with any degree of certainty that this was a case of congenital cataract, still it was to be presumed from the fact mentioned, and also from its character, that such was the case. Admitted April 20th, 1869.

Possesses only sufficient vision to enable him to recognize the outlines of very large objects when near.

22d.—The pupils having been thoroughly dilated, and the patient otherwise prepared, Dr. Mitchell, assisted by Dr. W. Christy Wilson, performed the operation of *broiement* (or breaking up) with a fine cataract needle through the cornea, the patient not being under the influence of any anaesthetic. A compress bandage was placed on both eyes, and it was ordered to be saturated now and then with sol. of atropia (one grain to one oz. of water).

Patient recovered rapidly, but the fragments of the lens seemed slow to absorb; it was therefore resolved on the 27th to extract the remaining portions of the lens, through a linear section of the cornea, for fear that their presence might excite iritis, there being already a slight tendency to irregularity of the pupil.

The section was made in the lower portion of the cornea.
Bandage and atropia as before.

Evening—Complains of pain in right eye.

R.	Morph. sulph.....	gr. $\frac{1}{2}$.
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29th—Some evidence of commencing iritis.

R.	Emplas canthar	(xi. in) No. ij.
	S. One to each temple.	

R.	Calomel.....	gr. x.
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R.	Pulv. opii.....	gr. v. M.
	Fiat pil. No. x. S. One four times daily.	

R.	Atropia.....	gr. ij.
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R.	Aq. dist.....	ʒi. M.
	S. Drop freely in the eyes.	

Compress bandage to be replaced by a simple one.

30th—Iritis subsiding.

May 3d—Pain in right eye—renew blisters.

8th—Considerable iritis both eyes. Pupils irregular and do not respond well to action of atropia. Repeat blisters and use atropine more freely.

10th—Symptoms of iritis subsiding. Pupils becoming more regularly dilated.

12th—All inflammatory symptoms have entirely disappeared.

27th—Entirely recovered from effects of operation. Pupillary margin of right iris free, pupil regular and responds freely to action of light. Pupillary margin left iris slightly adherent, pupil displaced downwards and inwards.

Discharged June 4th. Vision in both eyes as good as is usually obtained after operations for cataract. It is impossible to state its exact condition, as the patient will have to learn (so to say) how to see.

CASE IV----Syphilitic Iritis, with Complications--Iridectomy--Cure. *V*
 T. F. S., aged 23, native of New York, admitted April 23d, 1869. About two years and a half ago, contracted syphilis, as evidenced by a small chancre on the glands penis, followed in short time by inguinal enlargement in both groins; one of the bubos suppurred. Several months ago had an attack of iritis in right eye, for which he entered the hospital, was treated and discharged. A few weeks since, the inflammation recurred in the eye with much greater intensity than at first, and in a few days, no treatment having been used, the eye became useless as an organ of vision. About a fortnight since, the left eye became involved, presenting all the symptoms of irital inflammation, ciliary neuralgia, etc.

Patient has had a pustular eruption---examination elicits the following conditions: Left eye--both ocular and palpebral conjunctivæ much injected; cornea somewhat clouded; sub-conjunctival vessels much engorged; pupil irregular; iris discolored, considerable photophobia; ciliary neuralgia; vision much impaired. Right eye--symptoms of a much less acute character than those of the right; conjunctival and subconjunctival tissues less injected; cornea in a nebulous condition with the degree of intensity increasing towards the centre Iris very much discolored, pupillary margin entirely adherent to capsule, and the pupil irregular and occluded by lymph deposit; vision consists of a mere perception of light.

R	Atropia Sulph.....	gr. i,
	Aq.	$\frac{2}{3}$ i. M.
	S. Drop freely in the eye.	
R	Hydrag. Proto. Iodid.....	gr. x,
	Ext. Conii, Ext. Opii.....	aa gr. iv,
	Ext. Lactucarii	gr. x. M.
	Fiat Pil. No. x. S. One three times daily.	
R	Ferri. Redact.....	ij,
	Ext. Gentian.....	q.s. M.
	Fiat Pil. No. xx. S. One three times daily.	

R Emplas. Canthar. (1x1 in.), No. ij. S. One to each temple.

Under the above treatment, the iritis gradually subsided in three weeks, but leaving the palpebral conjunctivæ in a slight granular condition and the cornea opaque as in the beginning.

May 10th.—A ten-grain solution of nitrate of siver was applied to lids, the patient being put upon a tonic course of treatment. This treatment was continued to the 18th, at which time the following was ordered:

R	Hydrag. Ox. Flav.....	grs. inj,
	Cerati Simp.....	$\frac{2}{3}$ i. M.
	S. Put a small portion in the eye two or three times daily.	

(The yellow oxide of mercury is the same chemically as the red oxide, but is to be preferred on account of its being an amorphous powder instead of existing, as is the case with the red oxide, in a crystalline state. It is prepared by precipitation from solution of bi-chloride of mercury with caustic potassa. M.)

This treatment was continued to June 12th, with marked improvement in the condition of the left eye.

All attempts to dilate the right pupil having failed, it was determined by Professor M. to perform iridectomy.

This was done with the assistance of Dr. A. W. Perry, the section and columboma being made above, for the purpose of avoiding, as much as possible, deformity.

The patient was not placed under the influence of any anæsthetic, and the only untoward symptom presenting was a profuse bleeding which followed the section of the iris. Cold water dressings were ordered, and the application, occasionally, of a strong solution of atropia.

14th.—Has recovered from the effects of operation. Vision already very fair.

21st.—Right cornea is still somewhat cloudy; vision improved but not perfect; can read 18 Jaeger at 15 inches.

Left eye (the one operated upon)—cornea clear, iris has resumed its natural color. Artificial pupil perfectly clear and vision perfect. Discharged.

✓ CASE V.—*Opacity of Cornea of long standing; operation; partial relief.*—J. P. Mc. C., farmer, native of South Carolina, aged sixty-five years.

Twenty-two years ago, the right eye was lost, and the left materially injured by an attack of purulent ophthalmia. Last fall he had a similar attack supervening upon a severe intermittent fever, and resulting in almost total blindness. Has had attacks of frontal neuralgia for about two years. Conjunctivæ of both eyes vascular, the palpebral presents evidences of a former granular condition. Right cornea completely staphylomatous and consisting entirely of cicatricial tissue. Left cornea cicatricial in its lower two-thirds, with the iris probably adherent to it in the whole of its extent. A very narrow, crescentic portion, about a line in greatest width, of clear cornea is seen at the outer and temporal periphery. Vision consists of a mere perception of light. Suffers no pain at present.

8th.—Prof. Mitchell, assisted by Prof. Logan, performed iridectomy on temporal side. Eye was ordered to be dressed with cold water applications and a solution of atropia to be used. No bad results followed the operation, and at the time of his discharge, on the 8th, vision had slightly improved. He was ordered, with the hope of clearing up a larger portion of the cornea:

R. Ung. Hydrag. Ox Flavi..... 3 i.

S. A portion to be pnt in the eye night and morning.

In writing for a renewal of prescription, under date of the 29th,

the patient says he is still improving slowly. Can see to get about.

CASE. VI.—*Occlusion of Right Pupil, complicated with Soft Lenticular Cataract; Loss of Left Eye; Operation on Right Eye, partial success.*—Josephine D., colored, aged 23, native of Louisiana, admitted from Marine Hospital, June 1st, 1869.

Six or eight years since, the left eye was destroyed by a blow. A year ago the sight of the right eye began to fail, but it is impossible to arrive, from the statements of the patient, at any fixed conclusion, as to the nature of the disease at that time existing, but it is presumed to have been of a sympathetic character.

Left eye is collapsed. Right eye somewhat more tense than natural; iris normal in color; pupil contracted and irregular; pupillary margin of iris adherent to capsule of lens; lens opaque. Vision consists in very little more than a perception of light; can barely distinguish the outline of a large object passing between her and the light.

8th.—Prof. Mitchell assisted by Prof. Logan, and in the presence of the Class, made a linear incision at the superior corneo-sclerotic junction, excised a large portion of the iris, and then extracted with the spoon, as much of the lenticular matter as was possible. A compress bandage was used, and ordered to be kept moist with solution of atropia. The success of this operation, although at first promising, was in a few days rendered doubtful, by the supervention of iritis and the closure of the new pupil with lymph.

In two weeks after the first operation, the symptoms of inflammation having disappeared, another large portion of the iris was excised, the operation being followed by no untoward symptoms.

The result in this case has been sufficient to justify the operation. She can see well enough to get about.

CASE VII.—*Partial Occlusion of both Pupils, with Displacement of one; Anterior Synechia—Iridectomy—Relief.*—Julia Ann H., colored, native of Miss., aged 15. Admitted June 3d, 1869. The present condition of the eyes seems to have been the result of a prolonged attack of strumous ophthalmia, dating three years prior to entry.

Right eye; pupil partially occluded, with lower portion of pupillary margin of iris adherent to central portion of cornea; upper margin free; pupil responds to action of atropia. Left eye; pupil partially occluded, irregular, and adherent to the lower and outward portion of cornea, producing displacement; a small extent of the pupillary margin is still free, and responds to action of atropia.

On the cornea of either eye at the point of adherence of the pupillary margin of the iris, there is a small leucomatous spot, evidence of the existence of an ulcer followed by perforation.

Vision of both eyes was much impaired—the impairment however, was completely relieved by the use of atropia.

June 9th.—Iridectomy was performed on the temporal-side of both eyes. Recovery was rapid, and the patient was discharged on the 14th with normal vision.

✓ CASE VIII.—*Cancer of Eye and Brain; Death.*—Eliza Cooper, colored aged 45, admitted June 10th, 1869.

History.—About five or six months ago, the right eye began to swell and pain her, and vision soon became extinct. After a month or two, the swelling involved the whole side of the face.

At time of entry, the eye projected from the orbit so that the lids could not be closed over it. Enormous chemosis of lower half of ocular conjunctiva—fully half an inch in thickness. Rest of conjunctiva simply red and vascular. Cheek and jaw much swollen, glands of the neck involved; intellect a good deal affected; no paralysis or want of co-ordination. Very little pain. Great emaciation and a cachectic appearance.

Prof. Mitchell stated that from the symptoms he suspected that the brain was involved, and that therefore an operation was out of the question. She was kept quiet and clean until the 21st, when she returned home, saying that she felt better. On the 27th, after eating dinner with some friends, and drinking a good deal of wine, she had some difficulty in finding her way home. Early in the night she was taken with vomiting, purging and convulsions. Next morning she was brought back to the hospital comatose. She lay in this condition till the morning of the 30th, when death closed the scene.

Autopsy two hours after death—made by Prof. Hawthorne.—Right side of scalp injected; left dry. Dura mater of a purplish color, vessels much injected. Anterior portion of right middle lobe of cerebrum adherent to cranium, of the natural color, but of a puffy consistence, except a hard nodular lump of cancerous matter nearly as large as a pullet's egg, imbedded in the cerebral substance. Right optic nerve and pituitary body harder and redder than natural. In the middle fossa of the cranium was a small pedunculated tumor, about one-fourth of an inch in diameter, attached to the dura mater. In the left middle lobe was a cavity, with walls of a dirty brownish, red color, separated from the ventricle by a small interval. Ventricle was apparently empty. Whole brain unnaturally vascular. Eyeball atrophied. Ocular capsule thickened, and infiltrated with cancerous material. Vitreous chamber occupied by a dark substance resembling coagulated blood. Antrum and bones of face healthy. Some small fibrous tumors of the uterus. Kidneys congested and somewhat lobular. Other viscera healthy.

✓ CASE IX.—*Hemeralopia; with Retinal Extravasation.*—J. B., aged 41, seaman, admitted May 18th, 1868.

History. At the battle of Atlanta, Ga., he was pitched, by a

bursting shell, against a gun-carriage, striking his head and the small of his back. He says he did not recover his senses for several days; when he did recover them, he was paralyzed on the right side and speechless. In a few days, he was able to walk, but remained speechless for several weeks. He still has some difficulty in expressing himself.

About two years ago, he became suddenly blind. At sunset, he began to see objects as if through a smoke, and by dark he was totally blind, remaining so for about a week. After this, his sight remained good for about a year, when he had a similar attack. About four months ago, he had another, and about a week before entry, a fourth. When admitted, he was suffering from hæmeralopia; vision becoming dim about sunset, and failing entirely about dark. During the day, his sight is tolerable; can read very large book type.

No abnormal appearance about the eyes, except that they are very large and prominent; but the ophthalmoscope reveals the existence of various spots of extravasated blood, very dark colored, irregular, and varying in size. Mental faculties very obtuse.

R	Strychniæ Sulph.....	gr. j.
	Quiniæ, Sulph.....	ij.
	Ext. Gentianæ, qs.....	
	M. Ft. pil. No. xx. S. One pill three times daily	
R	Ung., Veratriæ.....	ij. S.
	Rub on brows and temple twice daily	

Under this treatment, the case progressed favorably, till July 4th, when the patient was found to be salivated, although he had taken no mercury, so far as could be ascertained. Chlorate of potassa was administered; twenty grs. three times daily, and he was directed to wash his mouth with chloride of soda---two oz. to the pint of water. Vision still improving.

July 15th.---Is recovering from the salivation. Vision as good as at any time since the war. Can read with the aid of glasses.

CASE X.—*Atrophy of Right Eye and Obliteration of Left Pupil.*
Operation.—Jenny Ramsay, colored, aged 65, admitted from Marine Hospital, June 1st, 1869.

History very unsatisfactory. She says she became blind about twenty-five years ago. The right eye is atrophied and collapsed; the result, she says, of neglect after an operation. Left pupil is completely obliterated. No vision.

June 9th---Prof. Logan, assisted by Prof. Mitchell, performed iridectomy on the temporal side of left eye. Lens was found to be absorbed. Usual dressing.

17th.---Can tell the direction of a window.

July 18th.---Can distinguish large objects.

CASE XI.---*Double Nuclear Cataract---Extraction---Partial Cure.*
Polly Wheatly, colored, aged 60, admitted from Marine Hospital, June 1st, 1869.

History. About four years ago, her sight began to fail, the right eye being first affected. Now she can distinguish large moving objects in bright sunlight. Both lenses opaque.

June 9th---Prof. Mitchell, assisted by Prof. Logan, performed iridectomy and linear extraction on both eyes. Dressed as last case. Some inflammation supervened, which was combatted by the usual remedies.

25th---Can count the fingers held before her.

✓ CASE XII---*Double Capsulo-Lenticular Cataract; with Dislocation of Left Pupil.*---Charity Smith, colored, aged 66, admitted from Marine Hospital, June, 1st, 1869.

History. Many years before the war, the vision of the left eye was lost, as the result of a blow. The right became involved, and in about a year she was quite blind. Left pupil is apparently dislocated downward, and hidden by a leucoma. Right eye contains a cataract of a regular stellate form. No vision whatever.

8th---Prof. M. performed iridectomy and linear extraction on both eyes. Cataracts capsulo-lenticular, the stellate appearance confined to the capsule.

Considerable inflammation supervened and the chambers of the right eye filled with pus. The inflammation slowly subsided under the usual remedies.

July 18th.—Can see a little with left eye; right somewhat atrophied; the cornea sunken and opaque.

✓ CASE XIII.—*Double Nuclear Cataract; Operation.* Hetty Jones, colored, aged 65, admitted from Marine Hospital, June 1st, 1869.

History. About two years ago her sight began to fail, the left eye being first affected. The left lens is opaque and vision confined to the perception of light. In the right eye the opacity is marginal, with it she can see large objects.

June 8th. Prof. M. performed iridectomy and linear extraction on the left eye. On the right, iridectomy alone was performed. A portion of softened vitreous body escaped from the left eye; some inflammation supervened and the patient was slow in recovering.

July 18th. Can see large objects.

N. B. The last four cases all were more or less complicated with disease of the deep-seated tissues.

✓ *Compound Dislocation of the Ankle-joint, with two cases:* By E. MASON, M. D., of Wetumpka, Alabama.

DISLOCATIONS of the ankle-joint are always important, because they pre-suppose great violence, and dangerous symptoms may ensue, from seemingly slight injuries. But when the dislocation is compound, it is still more serious, for there are few accidents,

to which the human system is subject, more fraught with danger. And perhaps there is none in which the surgeon is more disposed to resort to conservative treatment, and yet, more liable to meet with disappointment in the result of his case. Often the parts are so easily adjusted, and the appearance of the joint so favorable, that he fails to appreciate the danger that lurks in the future. The importunities of friends, and patient, too, are well calculated to urge him to an effort to save the limb, even when his better judgment would dictate a different course of treatment.

We may expect an ankylosed joint in these cases under the most favorable circumstances; far more probable is loss of the limb, or death from traumatic tetanus. Fully appreciating the importance of this injury, I indulge the hope, that the record will not be without interest, at least to the younger members of the profession, who are just entering the difficult field of surgical practice, and who may meet with this accident among their first cases.

CASE I.—I was called about nine o'clock, p. m., October 19th, 1865, to see M. F., a white female, aged about twenty years, who had dislocated her left ankle by jumping from a hack, the horses of which were running away. Reduction had been accomplished before I saw her, but a careful examination revealed a compound dislocation outward, with extensive laceration of the soft parts, without fracture. I applied a simple retaining bandage, directed cold water dressing, and sufficient morphine to relieve pain and calm nervous excitement.

I saw her early the next morning, and found that she had rested badly during the night, and was still suffering much pain. The restless, anxious expression of her countenance, plainly indicated that her nervous system had received a severe shock.

In consultation with a medical friend, it was agreed that traumatic tetanus was greatly to be feared, and we announced, as the result of our consultation that amputation offered the best means of safety. The patient and friends seemed very much astonished at this opinion, and refused to permit the operation. They would not consent to have another consultation, but earnestly begged us to try and save the limb, expressing perfect willingness to take all responsibility in the case. Having discharged our duty, and thinking that success might not be impossible, we determined to make the desired effort.

The treatment consisted of a sustaining splint and bandage, cold water-dressing, light diet, laxatives to put the bowels in a good condition, and anodynes to secure rest. The case seemed to progress well, and the friends had begun to congratulate themselves on a favorable termination; but on the sixth day unmistakable signs of tetanus made their appearance. The anxious look, contracted features, difficulty of protruding the tongue, and stiffness of the jaws, too plainly and sadly announced the fate of the poor patient. The wound, which looked well the previous

day, was now gaped open, without healthy looking granulations, and discharging a thin, sanguous, unhealthy looking pus. The limb was immediately put in a position to secure perfect drainage, and the dressing changed to meet the indications now presented. The free use of opium was continued, with the occasional resort to chloroform by inhalation. The tetanic symptoms did not increase, there were no convulsions, nor violent paroxysms, deglutition was not interrupted; but gangrene rapidly supervened and the vital forces began suddenly to fail. The friends now begged for amputation, although we stated that, in our opinion, it did not offer a shadow of hope. Whilst we believed an operation promised nothing, yet, at the earnest solicitations of the friends and the recommendation of several medical friends, I consented to operate.

In consultation it was thought best to make the experiment by amputating at the lower third of the thigh, hence I proceeded to perform the circular operation in the usual manner. The influence of the chloroform soon passed off, and the unfavorable symptoms at first did not seem to be increased; but in a few hours she began to fail more rapidly, in spite of the most sustaining treatment. In less than twenty-four hours our patient calmly passed from earth to that land where accidents are unknown, leaving no doubt in our minds as to the propriety of primary amputation, and that a resort to it would in all probability have saved her life.

CASE II.—April 21st, 1869, nine o'clock A. M., at the request of Dr. Green, Dr. Harris and myself visited Mr. S. P., aged about fifty years, who the day before had received a severe injury of the right ankle, by a mule falling backwards upon him. Dr. Green's diagnosis was, "compound dislocation outwards, with comminution of the end of the tibia." This opinion we found entirely correct. The parts had been very recently adjusted and all looked well. The inexperienced surgeon might have been easily deceived as to the extent of danger to be apprehended. We were informed that the patient had had a severe rigor several hours before our arrival and the anxious expression of his face evinced great bodily suffering and mental distress. His constitution was enfeebled by frequent attacks of chronic rheumatism, which greatly increased the unfavorable prognosis in his case.

Bearing in mind my former case, and remembering the words of Professor S. D. Gross, "the lesion is profound and an attempt to preserve the parts would be worse than foolish," I did not hesitate to suggest immediate amputation. This opinion was fully concurred in by medical friends, and not objected to on the part of patient and his friends.

With the valuable assistance of Drs. Harris and Green, I proceeded, twenty-four hours after the accident, to amputate, in the lower third of the leg, in the usual manner; sulphate of morphia was given freely to quiet nervous excitement. About twelve

hours after the operation he had another rigor, and he was then put on quinine and morphine for several days. Union did not take place by the first intention, but the healing process was readily accomplished by granulation. A large *gluteal abscess* formed from a bruise received at the time of the injury, and was lanced on the 12th of May. The patient became very much exhausted, but good diet and tonic treatment have sustained him, and he is now, the 3d of July, doing well. I hardly think that there can be a single doubt that an effort to have saved the limb in this case, would have forfeited the life of the patient.

Epithelial Cancer of the Neck of the Womb—Amputation of Neck—Recovery. By J. S. WEATHERLY, Montgomery, Ala.

JULY 23d, 1867.—Tillah Holt, mulatto, applied to me about six months since, stating that she had been troubled with a continual discharge, which she supposed to be her “courses,” for the last five or six months. That almost all the time it was bloody and at times very profuse, but that occasionally it was watery and slightly tinged with blood.

I examined her with Sims' speculum, and I diagnosed what I thought to be a well defined epithelial cancer, upon the posterior lip of the os. It was a jagged, dirty-looking affair, bleeding upon the slightest touch. The vagina, however, was healthy, and the body of the womb appeared also to be unaffected as yet.

To-day (July 23d, 1867), after consultation with Drs. Williams and Gaston, of this city, I determined to amputate the neck of the uterus. The bowels having been evacuated by means of an enema, she was placed upon the table in Sims' position, when I proceeded with the operation: Introducing Sims' speculum, the uterus was drawn down with strong Velsullem forceps; the chain of the ecraseur was easily made to encircle the tumor, and also the greater portion of the posterior lip and a considerable part of the anterior lip, when the whole mass was severed. Then with Sims' knife I pared off a large portion of the remainder of the anterior lip, which seemed to be diseased. There was scarcely any haemorrhage. I dressed the stump with cotton saturated with persulphate iron, and dry cotton on top of that; administered a dose of morphine and put her to bed. She stood the operation well and without chloroform. Drs. Williams and Gaston rendered me valuable assistance in the operation.

24th, 10 A. M.—I removed the dressing and found that she had not lost a drop of blood, and did not during the removal of the dressing. The wound looks healthy, dressed it with cotton soaked in glycerine.

25th.—Wound looks remarkably healthy, and she seems to be in a fine condition, and says that she feels much better than she

did previous to the operation. Applied some dressing to wound.

30th.—Has been dressed every day with the glycerole cotton ; surface of the wound contracting rapidly. To-day, however, there is a discharge of blood, supposed to be menstrual as it is about time.

August 2d.—Menstruation about over. Applied to-day some dried sulphate zinc to the surface of wound.

3d.—No irritation from zinc. There is still a slight bloody discharge.

4th.—There is no discharge to-day, wound looks well. Prescribed Donovan's solution in ten-drop doses three times per day.

5th.—No discharge, the glycerole cotton was removed without a stain upon it, and entirely clear of odor. The wound looks remarkably well ; but wishing to make things as sure as possible, I again applied the zinc, and dressing with the glycerole cotton as before. The woman looks much better, and says that she feels better than she has for months.

6th.—No discharge—surface of wound covered with a whitish coat, supposed to be from the effects of the zinc. Exterior surface bordering wound looks perfectly healthy.

12th.—Wound has continued to contract and improve. Applied zinc again to-day, and dressing as before.

She menstruated again on the 26th, for three or four days, natural every way, with little or no pain.

Sept. 1st.—I examined her to-day in the presence of Dr. Gaston. Wound entirely healed and no appearance of disease that we could detect.

I might state that this woman was married, and had had several children, though she had had none for several years previous to the operation. Cancer cells were discovered in the tumor which was removed, and I have no doubt but that the woman would have died in a short time if the operation had not been performed.

I saw Tillah to-day, April 20th, 1869, and she seems to be enjoying perfect health.

RESUMÉ OF FRENCH MEDICAL LITERATURE.

BY J. H. WIENDAHL, M. D., NEW ORLEANS.

CHEMISTRY.

Phosphorescence of Gases.—M. de la Rive relates several observations made by Sarrazin upon the phosphorescence of gases as influenced by the electrical spark. His views are, in accordance with those of Edmond Becquerel, that oxygen, either isolated or in combination, is the only substance phosphorescent, when sub-

mitted to the electric spark. This opinion was opposed by several members of the Academy, who thought the presence of nitrogen necessary for the production of the phenomena, but they were answered by M. de la Rive, by recalling to their mind a beautiful experiment of the laboratory, in which the passage of the electrical spark, through a long tube filled with oxygen and a small quantity of sulphuric acid produced an amount of phosphorescence sufficient to light up a large hall.—*Union Médicale*, Sept. 25, 1869.

OPHTHALMIC THERAPEUTICS.

Disappearance of Hallucinations upon the Operation of Iridectomy and Extraction of Cataract.—A Viosin, to support his views that hallucinations require direct treatment more than isolation or bracing atmospheric influences, cites the two following cases. The first was a woman of fifty five years of age, melancholic from illusions and hallucinations, and suffering at the same time with severe circumorbital pains, with considerable diminution of sight of left eye. The right eye was almost lost, and the pupil of the left was very sluggish in its response to the action of light. (The disease was most probably irido-choroiditis. EDS.)

Relief from the hallucinations followed at once the operation of iridectomy, the vision being at the same time restored.

The other case, also a woman, aged seventy, was, whilst in the Hospital operated upon for double cataract of eighteen years' duration, and upon the restoration of vision was relieved of illusions and hallucinations of persecution.

Hypodermic Injection of Morphia in Ophthalmic Neuralgia.—These are of especial importance in subduing those severe ocular circumorbital pains, which are so often attendant upon the various diseases of the cornea, upon iritis, irido-choroiditis, glaucoma, etc.; as illustrations, the two following cases in charge of M. Terson, are cited. The first, a case of corneitis, of some two years duration, with a small ulcer, photophobia intense, and pain so severe as to prevent sleep. Conjunctiva congested and chemosed, abscess threatened at bottom of ulcer; pain was relieved at once by a hypodermic injection in the temporal region of two-sevenths of a grain of morphia. The continued use of a solution of one-half this strength for several days, caused an amelioration of all the symptoms (we can from experience endorse the statement of the author, very often when all other treatment has failed, an injection of one-fourth grain solution of morphia in the temporal region, produces instant relief from intense and distressing photophobia.—W. S. M.)

The other was a case of diffused purulent infiltration of the cornea in a man of sixty-five years of age, and the same results were obtained after a use for three days of an injection of the same strength.—*Union Médicale*, May, 1869.

THERAPEUTICS.

Danger of Injections of Perchloride of Iron in Sanguineous tumors—A child ten weeks old, having three sanguineous tumors respectively on left cheek, left leg, and right lumbar region, was brought to Professor Sautesson, of Stockholm. Whilst in the country, the child had been for two weeks in charge of a physician, who was prevented from vaccinating the tumor on the face by want of virus, and instead applied collodion, but this produced no change.

The tumors were beneath the skin and evidently still growing. That on the face, the one of greatest importance, was an inch in diameter, and occupied more than half the thickness of the cheek, being situated midway on a line drawn from the ala-nasi to the lobule of the ear. Vaccination not promising any hope of success, and such procedures as excision, ligation and cauterization presenting serious objections, the choice was limited to acupuncture by galvanic needle, and injection of a coagulating liquid. The latter was preferred by the Professor, and immediately, with the assistance of Prof. Abelin and Dr. Schlerg, the injection of a liquid composed of ferri perchloridi six parts, and alcohol one part, was commenced. The injection was made with a subcutaneous glass syringe containing eight or ten drops of the mixture. The capillary tube was first introduced and directed vertically across the tumor, towards its centre, and only one-half of its contents injected, it was then withdrawn and re-introduced, horizontally, the point being directed deeper in the tumor. Before the second injection was completed, the operator was forced to withdraw the syringe on account of the appearance of threatening symptoms in the child. Death took place in about two hours.

Autopsy on the day following death, revealed the following symptoms: The tumor was much lessened in size, its tissue from being spongy, had become firm and solid from coagulation of the blood.

The surrounding veins (facial and its ramifications) were empty. The external and internal jugulars contained no clots in the superior portion, but as they approached the chest, the contained blood was generally clotted. The clots became more and more firm in the subclavian, the superior vena cava and in the right cavities of the heart. These were literally distended with coagulated blood. The left auricle contained a small clot, the left ventricle was empty. It is probable that in introducing the tube the second time, one of the veins (perhaps a branch of the facial) was penetrated. The history of this case, and its unfortunate termination, suggest as a precautionary measure against a similar occurrence, pressure between the tumor and the heart when performing the injection.—(Monatssh. bh. South—Union Médicale, May 15th, 1869.)

Injections of Lime Water in Croup.—Influenced, no doubt, by the published observations of Bricheteau and Adrian on the

solvent property of lime water upon false membranes, Dr. Alba, physician of St. Lazan, in Berlin, introduced the canula of a Pravez syringe between the tracheal rings, and injected a few drops of that solution. Finding that this was attended by no accident, he then injected a syringe full without producing a paroxysm of suffocation. Considerable excitement and cough followed, and the child suddenly expectorated membranous diphtheritic flakes.

The treatment was repeated in six cases, but only one of these was cured, a girl of ten years of age, upon whom tracheotomy was about to be performed. In this case the injections of lime water were made twice daily, and a decoction of bark was internally administered. In the remaining five cases (all of whom were under five years of age), the period of suffocation had set in before the commencement of the lime water treatment.—(*Berl., Klin., Woehensch No. 5.*)—*Union Médicale*, June 15th, 1869.

PHYSIOLOGY.

Review of an Essay on the Cause of the first Sound of the Heart. By PAUL GUTTMAN.—Heretofore the opinion that the first sound of the heart was due to auriculo ventricular tension, an opinion first advanced by Raouinet in 1832, has been adopted, but has, nevertheless, met much opposition on the part of certain authors, who attribute it to contraction of the muscular fibres of the heart, basing their conclusions on the following facts: 1st. That energetic contraction of any muscle is attended by a sound. 2dly. That degeneration of the mitral valve does not prevent the first sound of the heart from being heard at its apex.

The solution of this question would be easy could we empty the heart, in life, and thus suppress the valvular click. From certain experiments of Ludwig and Dogiel, the conclusion has been arrived at that the heart, when empty, produces a sound, but weaker than the normal one, they consequently incline to the muscular theory. Guttman's experiments seem conclusive. They consist in interrupting in animals, and at the will of the experimenter, the current of blood in vessels both leading to and from the heart. As a result, he affirms that the first sound attends the state of emptiness, but, that contrary to the assertions of Ludwig and Dogiel, it does not then retain its accustomed tone; it bears to the normal sound the same relation which is found to exist between the sound produced on percussion of an empty or of a full lung, a lung in the state of health or one engorged. Furthermore, he concludes that the first sound is due mainly to the valvular click, and that the muscular contraction is of but secondary importance. He adds, as an additional fact, that in a state of emptiness of the heart, the slap or click of the auriculo ventricular valves is incomplete, since the papillary muscles contract but slightly. This feeble contraction is unable to produce a sound, hence the conclusion that the influence of muscular contraction upon the first sound is of little importance.

The central Journal of Medicine of Berlin, records certain clinical and physiological experiments of O'Bayer, of Davour, the deductions from which made by the experimenter apparently sustain the views advanced by Ludwig and Dogiel. O'Bayer strongly advocates the correctness of his conclusions, and adduces as an argument that it is impossible to offer, in the extended series of heart disease, a single fact which will demonstrate the production of the first sound of the heart by the valvular click exclusively. On the other hand, he recalls to mind the fact, that in degeneration of the mitral valves, terminating in insufficiency, a sound is still heard, though covered greatly by the systolic contraction and only perceptible with careful attention.

Supposing this author's mode of observation to be perfectly correct, it yet remains unproven by him that the first sound is exclusively muscular: Firstly. It is never as intense as the sound which arises from the right ventricle when the tricuspid valves are healthy. Secondly. The mitral insufficiency may be incomplete, the left auriculo-ventricular valves yet retaining a part of their movement.

Guttman is inclined to believe that the first sound is propagated from the right ventricle to the apex of the heart, an opinion Traube combats with the following fact, viz: That in advanced insufficiency of the sigmoid valves of the aorta, the systolic sound is completely wanting at the apex of the heart; a condition which cannot be inferred to be due to consecutive hypertrophy of the left ventricle, since in hypertrophies dependent on other causes, diseases of the kidneys for instance, the first sound is clearly perceptible.

The absence of the systolic sound in insufficiency of the aortic valves is easily explained upon the assumption that valvular tension is the cause of the first sound. The intensity of this sound depends, according to Traube, upon the various degrees of tension. The researches of Baumgarten prove the tension at the offset (corresponding to the diastole of the ventricles and to the systole of the auricles) to be weak, whilst at the end, when it corresponds to the ventricular systole, it is much more energetic. As their tension diminishes, the first sound becomes weaker, and finally, when at a minimum, that sound disappears.

Such is the condition existing in aortic insufficiency; on the one hand, the tension at the offset increases, because the mitral valve receives at the end of the ventricular diastole the presence of the blood, which flows back from the aorta; on the other hand it diminishes, because the left ventricle forces its contents into the vessels, where this tension is weaker than in its normal state.

Bayer maintains, that the disappearance of the systolic sound, in insufficiency of the aortic sigmoid valves, is due to fatty degeneration of the muscular fibres of the heart. Guttman cites, in opposition to this opinion, the very rare occurrence of fatty degeneration of the left ventricle, and the disappearance of the

systolic sound, in aortic insufficiency, even when compensating hypertrophy has attained its greatest development. Moreover, fatty degeneration of the left ventricle can not explain the absence of the systolic sound, since the first sound is heard in a satisfactory manner even when the heart is loaded with fat.—(Translated from the German of Central Journal of Medicine.) *Union Médicale*, May, 27, 1869.

SURGERY.

(From Transactions of the Imperial Society of Surgeons.)

Hypodermic Injection of Corrosive Sublimate in Syphilis.—M. Leigois, surgeon of l'Hôpital du Midi, made a very interesting report to the society concerning certain results which he had obtained by the subcutaneous injection of minute quantities of corrosive sublimate in syphilis. Before the institution of his experiments, Scarenzio, Ambrosoli, Ricordi and Monteforte, in Italy; Max V. Van Mons, in Belgium; Barclay Hill, in England; Leurin, Hebra, etc., in Germany, and Hardy, A. Martin, and Brichtneau, in France, had from 1864 to 1869 made use of mercurial salts hypodermically.

The commencement of Leigois' experiments date from October, 1867, the mode having been suggested to him by Lleurin, of Berlin, at the International Medical Congress.

Eighteen women of the Loureine, having severe secondary syphilis, were placed upon this mode of treatment: Daily hypodermic injections were made of 6-65 of a grain of bicarbonate of mercury, to the 1-30 of an ounce of water. No tonics were prescribed nor was any local treatment used. All the patients were cured in from fifteen to twenty days, but the production of frequent salivation, and of sloughs at point of insertion of the instrument, caused a suspension for a time of the method.*

The experiments were resumed on the 15th of December, 1867, at the "Hôpital du Midi," and after several attempts, Dr. L. discovered that the 4-65 of a grain of corrosive sublimate to the 1-15 of an ounce of water, could be used as an injection three times daily with perfect freedom from harm. This proportion was adopted thereafter.

From the 15th of January, 1868, to the 1st of December of the same year, he practiced this method on 196 patients, selected from the most severe cases. No other treatment was used, save with a few, to whom he administered in addition bark and iron. The mild cases in the ward were put upon either the pill of protiodide of mercury, or the liquor of Van Swieten, or upon tonics without local treatment.

From the 1st of December, 1868, most of the severer cases of

* An English writer upon this subject advises as a preventive of the salivation, strict cleanliness of the mouth, and the use of two or three times daily of a small portion of alum: The patient is instructed to carry in his pocket a piece of alum the size of a hazle-nut, which he is to suck for a few moments several times during the day. This is a simple remedy, easy of use, not disagreeable and certainly worthy of a trial in any case in which from idiosyncrasy, etc., salivation is feared.—W. S. M.

syphilis were subjected to the injections and local treatment, a certain number being at the same time treated, by way of comparison, with mercurial inunctions.

The formula of the injection is as follows:

R Hydrag. Bi-Chloride.....	.....
Morphia Sulph.....	ana, gr. iij,
Aq. Distillæ.....	z iij—

which gives slightly more than the 4·65 of a grain of the bi-chloride and morphia, to the 1·30 of an ounce of water (16 drops), the capacity of a Pravaz syringe.

Every morning two injections were made in the cellular tissue of the back, one on each side. The insertion of the instrument was accompanied by a sense of pain, very variable but quite supposable. In no case did there result inflammatory reaction at the seat of insertion. In four out of 196 cases slight salivation occurred. Usually in from five to six days after commencement of treatment, amelioration of the symptoms was produced. It was noticed that the dry forms of the disease were usually the most tardy in their response to treatment; the mucous patches seemed the most amenable.

In no one of the cases did aggravation of any of the symptoms occur after the fifth or sixth day. In all, the digestive functions were stimulated, and the flesh augmented. 193 of the cases presented secondary symptoms; three tertiary; 127 of the 196 were cured, and 69 were improved.

For the cured, the minimum number of injections used was 68, of the improved, 50. The number of relapses for the cured were 21 (9·45 per cent.), for the improved, 14, ($\frac{2}{3}$ per cent.) By the improved are meant those in whom there remained no traces of the secondary symptoms presented at commencement of treatment.

The following general conclusions are given: The disease yielded the more easily in those who had the more recently undergone mercurial treatment. The average number of injections required was 60, or thirty days of treatment. Next in order of amenability, came those who on entrance had been put on a mercurial and tonic treatment and now requested the hypodermic treatment, in those 60 injections was the average number. Next came those who had taken a tonic treatment in connection with the injections, in whom the average was 63. Finally, those whose treatment was exclusively hypodermic, presented an average of 74 injections or 37 days treatment. Results of other influences are noted as follows:

As regards the *influences of age* (the patients were from 15 days to 40 years of age) the younger the patient the greater was the number of injections required, but at the same time the less was the tendency to relapses.

Nature of Secondary Accidents.—Roseola yielded first, then mucous patches combined with other complications. The relapses

were in an inverse ratio to the number of injections, except in those cases with roseola in whom there were no relapses.

Tertiary Accidents.—The three cases required from thirty to forty-two injections for the cure.

Date of Offset of the Secondary Accidents—The number of injections required for the cure was greater as the date of appearance of the symptoms was the farther removed.

Incubation of Chancre.—The number of injections were directly proportional to the duration of the incubative period.

Duration of Chancre.—The longer its period of existence before treatment, the greater the number of injections required. Syphilis therefore is unyielding in proportion to its duration, besides, the danger of recurrence is in ratio with the number of injections required to remove the secondary manifestations.

As a Preventive.—The injections have both warded off the secondary accidents, and reduced their intensity.

In conclusion, the advantages of the hypodermic method of treating syphilis, with bi-choride of mercury, may be summed up as follows:

1st.—That of being very handy. 2d.—of protecting against local accidents. 3d.—Of almost surely avoiding salivation. 4th.—Its greater efficacy over other treatment. 5th.—The freedom from disturbance of the digestive and other functions. 6th.—Its acceptability to the sick, who willingly consent to be thus treated during the time necessary for a definite cure. 7th.—The apparent lessening of danger of relapse. 8th.—The rendering of the relapses more mild. 9th.—The more ready palliation, than by other methods, of the graver accidents of the disease.

In opposition to the above advantages the following disadvantages, or more properly inconveniences, are noted:

1st. The production of pain, but this is generally slight, always supportable.

2d.—The requirement in the minimum of thirty days for the cure—an annoyance, however, more than compensated for by the promise of a lasting cure. No treatment disturbs so little as the hypodermic, the nutritive function as Liegois has proven by actual comparison of weights.

From these, together with comparative experiments on healthy animals, Leigois has arrived at the following conclusions as regards the action of corrosive sublimate (and by parity of reasoning of other mercurial salts). Its modes of action are thus dependent on the dose. In small doses it is reconstructing, in larger alterant—and in still larger, tonic. Its effect in syphilis may be due therefore, not to any specific action, but simply to its reconstructing power, or its influence upon the functions of nutrition.

Generally, the cured had increased in weight; very rarely had they diminished. It is probable that the stimulated nutritive act of assimilation, the cause of the increase of weight, is prime actor in the cure of syphilis, but its curative act cannot be explained by the stimulated state of nutrition alone.

Examination of the urine showed an increase of the watery portion, of the solid material and in density, thus whilst the work of nutrition was increased, that of denutrition was also increased, although in less proportion. It is only to renovation of the organic material that we can properly attribute the disappearance of the constitutional morbid state of syphilis. Syphilis should be considered as a disorder of the nutritive function brought about by the penetration into the organism of a specific virus, in other words, the disease is an aberration in the formation of hypergenetic productions.

Legois has proven by actual experiment that injections of bischloride of mercury beneath mucous patches, caused their removal in a few days.

Finally, he has traced, step by step, to their complete disappearance, all the retrogressive acts of nuclear or cellular embryopathic elements.

The author's greatest objection to the use of proto. iodide of mercury rests in the large doses required, its action being therefore, according to his theory, alterant instead of stimulant.

In conclusion, the author suggests the probable use of this treatment, with same prospect of success, in all cases of cutaneous affection.—O. TARTRALE, *Union Médicale*, Sept. 12, 1869.

Cysticercus of the Palm of the Hand.—On the 27th of April last, Auguste Jergan, hair-dresser, aged 35, consulted Benj. Anger for a tumor the size of a pigeon's egg, situated on the right thenar eminence. Its color did not differ from that of the rest of the hand; it was slightly fluctuating, and pressure produced but a slight sense of pain. The little finger was contracted, almost semi flexed.

The patient said that he had for the first time, four years ago, perceived that his hand had begun to swell, and that the tumor had been punctured by a physician two years ago—fluid escaped and the tumor seemed almost entirely to disappear; in a short time it became again progressive and attained its present size.

His health had always been good, and he now sought the removal of the tumor on account of its annoyance to him in his profession and not from any sense of pain. He has not now nor has he ever had any growth of a similar character on other portions of his body.

To determine fully the nature of the tumor, an incision of two-thirds of an inch in extent was made in the middle line of the thenar eminence. The incision was followed immediately by an escape of a yellow serous fluid, (its chemical nature was undetermined), which in its escape forced before it a false membrane. This, upon ascertaining that it was unconnected with the peripheral tissues, was extracted. The wound was dressed with alcohol, and to-day (May 19th, 23 days after the operation,) the patient is almost well.

Upon examination the false membrane presented the aspect

of a bursal cyst. It was of a white, pearly color, humid, very brittle and rolled under the fingers. Reversed, it presented a small "cul de sac" terminating in a vesicle, the size of a large pea, and continuous with a pedicle attached to the wall of the cyst. This little cyst, tolerably hard and opaque, contained in its interior a small yellow body, folded as it were upon itself. Prior to the operation, this encysted vesicle, suspended from the internal wall of the first cyst, must have been surrounded by liquid in which it floated.

Microscopic examination of the yellow body proved it to be a small animal, terminating on the opposite side of its vesicular attachment in a head. It possessed an imperforated trunk surrounded with hooklets, beneath which were four blackish granules—the suckers of a cysticercus. Beneath the suckers was situated the pedicle—that is the neck of the animal was continuous with the small vesicle contained in the larger filled with the liquid above described. The cysticercus was of the variety "ladrique" (*c. cellulosus*) of Rudolph and Bremser, that variety which produces in man the *tænia solium*. As a cysticercus it is the scolex, or larva, of the *tænia*, and varies in development according to the nature of the animal in whose body it is located.

In the swine, a disease observed from earliest antiquity, ladierie (*lepra* or *measly disease*) is produced; in the sheep it causes vertigo; in the dog the *tænia serrata* is developed, in the fox the *t. crassipes*, in the wolf the *t. marginata*, in the zymbeline *t. crassicollis*, etc., etc. After becoming assured of the various transformations of the cysticercus in animals, man was experimented upon, and the same convincing results elicited. Kuchenmiester of Zittau, in 1835, gave a woman, condemned to death, without her knowledge, a few instants before execution, seventy-five cysticerci obtained from a hog. Autopsy, 48 hours after death, revealed the existence of four small common *tænia*, attached by their hooklets to the duodenal mucous membrane. Leuckart confirmed these observations by experiment. Humbert, of Geneva, in 1854, experimented upon himself, and two months after the ingestion of the cysticerci, he felt the presence of the *tænia*, and afterwards voided various fragments. The epidemic, which prevailed two years ago at Lille, I believe confirms anew the assertions of the above mentioned distinguished observers.

The egg encloses an embryo possessed of three pairs of hooklets, of which two serve to divide the tissues of the animal in which the parasite is destined to live. Then, by organic process, the scolex produces an organized individual in its proper matrix, like a caterpillar in its cocoon, and it is the second individual which is the cysticercus properly so called, terminating in a vessel filled with serum by which it is protected. In this state it occupies the cellular or adipose tissue, or is beneath the skin and aponeurosis as in the one above mentioned. It is established that the cysticercus *cellulosus* multiplies by a gemmiparous act

and not by generation, for it has no sexual organs. If obstacles now prevent the escape of the parasite from the parenchyma in which it is encysted, its evolution is arrested, and it progresses no higher in the scale of metamorphosis. After having attained a greater or less volume, it undergoes various alterations and then dies; but if circumstances favor its escape from the cyst and if it reaches the digestive canal of man, through either his food or drink, a different phenomena is manifested: By its hooklets it adheres to the mucous membrane, looses its vesicle, which becomes atrophied, transparent, elongated and tape-shaped; forms successive articulations, and finally, in two or three months, becomes a tenia. Each articulation is bi-sexual. The ovaries, at each period of fecundation, become filled with ova; the articulations disunite and separate completely from each other, to loose their germinative properties. Progressively they become rudimentary, vesicular, tape-formed and fragmented, or, according to Van Beneden, protocolex, dentocolex, strobile and proglotis.

Various theories have been advanced with a view to explaining the introduction and development in the tissues, of animal as well as vegetable parasites, among which may be cited the theory of Vidal, who considered them as aquatic or terrestrial animalcules which become developed on their introduction into the economy. Another theory supposes that they circulate with the blood and penetrate even the most minute capillaries, being smaller than the blood globules. Pallas and Brera have advanced the opinion that they are formed spontaneously in the midst of the tissues. Finally, and perhaps with more propriety, the existence of a true helminthiasis has been supposed. No matter what may be the truth of these theories the present case is of especial interest on account of the location of the cysticercus.—(Léopold Lafitte, Élève des Hôpitaux de Paris).—*Union Médicale*, May 27th, 1869.

CHRONICLE OF MEDICAL SCIENCE.

QUARTERLY RECORD OF SURGERY.

COLLATED BY SAM'L LOGAN, M. D., PROF. OF SURGERY, NEW ORLEANS SCHOOL OF MEDICINE.

Richardson's Splint, for the Treatment of Fractures of the Clavicle, Scapula, and neck of Humerus.

DR. HAYNES L. RICHARDSON, of this city, has devised a very useful and valuable apparatus for the treatment of fractures in the neighborhood of the shoulder. The accompanying illustra-

tions will give a better idea of its construction and mode of application than any word description. It is, as will be seen, composed of three parts, and has three points of attachment, viz., to the

Fig. I



side, axilla and arm. The arm and body pieces are semi-cylindrical in shape, and are composed of some flexible but moderately stiff material like leather covering a pasteboard foundation, hard rubber or papier maché, and are fastened together by means of rivets, with sufficient space being left between them to allow the passage of strips of adhesive plaster. The crescentic pad is received as a crutch in the axilla.

For fracture of the clavicle the crutch is crowded firmly in the axilla, the arm piece secured to the arm by circles of adhesive strap; the shoulder is then raised and the arm carried backwards until the fragments are brought into position, when the body splint and crutch are secured alike by straps of plaster.

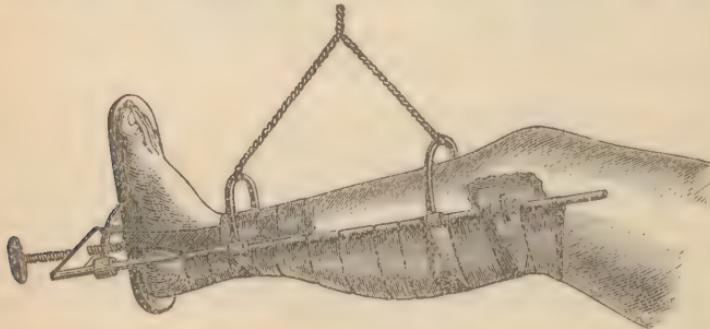
For fracture of the scapula the arm is carried forward instead

of backwards, before the splint is secured to the side. For fracture of the *humerus* the arm is secured in its most natural and easy position. In all other respects the splint is adjusted the same for fracture of either of the above-mentioned bones. After the splint has been applied the arm may or may not be flexed at a right angle on the chest, and supported by a sling from the neck.

This apparatus is simple in its construction and application, and differing from all other appliances in not interfering with the opposite shoulder. It is adjusted with great ease and dispatch (*neither rings, pads, nor bandages being required*), and will retain fractures of the above mentioned bones on either side in position better, and with much greater comfort to the patient, than any other apparatus now in use, and does not need to be readjusted during treatment. It has been used in several cases with entire satisfaction to the surgeon and the patient.—*New York Medical Record.*

A New Fracture Apparatus.

A new dressing for fractures of the leg has been devised by Dr. E. D. Kittoe, of Galena, late medical inspector U. S. A., which, on account of its convenience and capability of being made by an ordinary mechanic, is deserving of commendation. It consists of two steel or iron rods a quarter of an inch in diameter and thirty inches in length. These are connected by a cross-bar at one end and by two sliding semicircles intended to go over the front of the leg. The accompanying engraving will illustrate the form :—



A foot-piece of wood sits between the rods, and is suspended to a steel semicircle by a clamp screw, so as to allow of its being turned in any direction, and also drawn to and fro on the rods, which are loosely clasped by the semicircle. The foot of the patient is attached to the board by adhesive straps either passed around the foot itself, or up the sides of the leg, as shown in the engraving. Through the cross-bar at the end of the rods passes

a screw ten inches long, which is attached to the foot-piece by a swivel joint. By these means the foot-piece is drawn down, making extension with any desired force. The counter-extension is made by two broad, thick pads, attached near the upper extremities of the side rods by clamp screws, so that they can be adjusted to any necessary length. These pads press against the bulge of the tibia on each side, just below the knee, and may be fitted to variable sizes by extemporized pads placed under them, thus making effectual counter-extension. The limb is supported between the rods by passing a bandage to and fro beneath it exactly in the manner of Smith's Anterior Splint; and the whole is then suspended by a branched cord to a hook in the ceiling, or to a wire arch under the bed-clothes. The branched cord is of course attached to the two sliding arcs which attach to the rods, as seen in the wood-cut.

The only cases where this splint cannot be used would seem to be those in which there has been contusion about the knee, so that the patient cannot tolerate the pressure of the counter-extension pads; but even in these cases it would have all the advantages of Smith's Anterior Splint, while in all other cases it adds to the merits of Smith's apparatus the benefits of perfect extension and counter-extension. It is a great comfort to a patient to have the free motion of the limb allowed by suspension, without losing the advantage of extension, or risking the displacement of the bones. Both these objects are gained by Dr. Kittoe's apparatus.—EDMOND ANDREWS, M. D.—*Chicago Med. Examiner.*

*On the Medio-Lateral Operation for Lithotomy : By HENRY LEE,
Esq., Surgeon to St. George's Hospital.*

[MR. LEE first performed the operation described, in October, 1867, and three months afterward, saw an account of Sir W. Fergusson's operation by a semi-circular external incision.]

The medio-lateral operation is performed in the following way:—

The patient is placed in the ordinary position for lithotomy, and a grooved staff having been introduced, the skin of the scrotum is held moderately tight by an assistant. An incision is then made in the median line of the perineum; this should extend through its posterior half terminating two to three lines in front of the anus; from this point the incision is continued for a quarter of a circle around the front and left side of the scrotum. The finger of the left hand may then be put into the wound and the rectum pressed back whilst an additional touch or two with the knife separates it still farther from the parts in front. The forefinger of the left hand is now passed into the rectum, and the

knife, with its back towards the bowels, is passed, at the posterior part of the central incision, into the membranous portion of the urethra. With the finger as a guide this is done with great ease and certainty; a bistoury or knife with a probe at its extremity is then passed into the same opening, and made to slide along the staff into the bladder. The blade of the knife is then directed towards the patient's left side and somewhat backward, and as it is withdrawn the heel of the knife passes in the direction of the original incision through the skin; the point of the knife remains very nearly in the median line; a free external incision is thus produced involving no important parts, with a small opening into the bladder. The urethra being opened in the median line is reached with the greatest facility with the finger, and the incision into the bladder is in the same way very easily dilated. The forceps, or any other instruments that may be used, are also introduced more directly into the bladder than in the ordinary lateral operation.

In this operation all the usual accidents and difficulties which are likely to occur in lithotomy are guarded against. With the finger in the rectum as a guide the urethra may be opened without difficulty, and the probe-pointed bistoury being guided by a grooved staff cannot well fail to enter the bladder.

The incision into the prostate gland is made from within outward, and this I consider an advantage. An incision made in the opposite direction partakes more or less of the nature of a stab, and the point of the knife, even when guided by the most skilful hand, will sometimes wander from the groove in the staff. I suppose that there is no operator of experience to whom this has not happened. It is an accident which, when it does occur, may generally be easily remedied; but still it is one which has led to very unpleasant results, and one which every operator would gladly avoid if possible.

The medio-lateral operation for lithotomy is performed in far less time than it requires to describe it, and I have been surprised, in operating both upon the dead and living subject, with what facility it is accomplished. The instruments which I have used are an ordinary staff grooved in the median line, a common narrow scalpel cutting on one side only, and a curved bistoury with a probe projecting two lines beyond the termination of its cutting edge.

In addition to the case just mentioned two others have recently come under my care, in which I performed the medio-lateral operation.—*St. Georges Hospital Reports*, Vol. 3, 1868, p. 27.—*Braithwaite's Retrospect of Pract Med. and Surgery*.

In-Growing Toe-Nail.

THIS painful affection is often a source of great worry to the medical attendant, as it is always a misery to the unfortunate

patient. Our readers will be glad to know what kind of treatment is found best in the large experience of our metropolitan hospitals. We are pleased, therefore, to have the opportunity of laying before them notes upon the subject from five well known hospital surgeons, whose opinions will be read with interest and instruction.

King's College Hospital.—In slight cases of in-growing toe-nail—an affection which in the great majority of instances has its seat in the great toe only, and is caused by the lateral compression of the toe by the boot—Mr. Wood scrapes down the nail on the affected side until it is thin and yielding, like paper. The thickened skin overlapping the nail is then pared off with a sharp thin-bladed knife until it is close down to the raw, but not so far as to draw blood. A pointed stick of the nitrate of silver is then applied lightly to the painful ulcerated chink, and a small piece of lint, rolled up so as to fit into the groove of the nail, is dipped in glycerine and applied by means of a thin strip of adhesive plaster or small india-rubber band.

In cases where the mischief is the result of hypertrophy of the thick skin forming the lateral margin of the groove, and without any deformity in the shape or thickness of the nail itself, Mr. Wood pares off the skin, under ether spray, to a level with the nail, and then applies the pressure as before by means of a small roll of lint. If the toe-nail itself be broad, distorted, irregular, and bent laterally by the pressure, the best plan is to remove a triangular portion of the nail itself in the middle line, the angle reaching down to the centre of the nail. This allows the nail to fold up and accommodate itself to the limited space without digging in at the edges.

But if there be much ulceration, irritation, and distorted growth at the matrix of the nail itself—which in long-continued cases, and in scrofulous or syphilitic conditions of the system, is sure, sooner or later, to ensue,—the only plan from which effective relief can be obtained is by the time-honored but excruciating process of division into the quick, down the nail itself at the inner third, and evulsions of the affected part of the lunula from the matrix. In doing so, it is important to get all that part of the root away entire, as a small portion growing up with an irregular angle will cause a speedy return of the disease. In all cases it is important also so to regulate and ease the boot, during the renovation of the nail, that the skin should not again overlap and be forced down upon the edge, which always induces a return of the disease.

St. Mary's Hospital.—Mr. Norton never performs any operation in the treatment of in-growing nails. He applies, in the following manner, a solution of liquor potassæ (two drachms to one ounce). A piece of cotton-wool is saturated with the solution, and pressed gently down between the upper surface of the nail and the soft tissues, which latter are usually in the form of a fungous mass of granulations. The solution permeates the substance of the nail,

and softens and pulpifies the superficial cells. The wool is kept constantly moist with the lotion, and the softened nail-tissue is wiped away each morning. The nail in a few days becomes thin and flexible, and if desired, can now be pared away without pain, or it may be allowed to remain for a few days longer, when it becomes entirely removed by the solution. Mr. Norton considers it most essential in the treatment that the lotion be continued until all ulceration has disappeared, otherwise the too early hardening of the epithelium becomes again a source of irritation, and promotes a return of the disease, or rather prevents a cure from being effected.

Of the several cases treated by this method during the past two years, one of whom suffered from in-growing nails on both great and both second toes, not one patient has returned to the hospital, and, therefore, Mr. Norton believes that in no case has there been a recurrence of the affection.

St. Thomas's Hospital.—Mr. Croft finds that, commonly, patients suffering from this disease do not come under his notice until the affection has been some time in progress. In such cases it is his practice to adopt the radical cure advocated by Dupuytren, which is to divide the nail lengthwise, and turn out the in-growing half of the nail. In all but the hardest patients he employs the ether spray to benumb the toe. He prefers to cut down the centre of the nail with a strong short scalpel, and then to raise the half-nail to be removed, by forceps (using the latter as a wedge), before plucking it from the matrix. In other cases he slits up the nail with scissors. He prefers this radical plan of treatment in advanced cases, because it saves the time of both the patient and surgeon, and because other plans include, besides time, frequent skilled dressings, of which poor people are rarely capable. In an early stage, Mr. Croft cuts out the in-growing corner of the nail, cauterizes the granulations deeply with nitrate of silver, places a small pad of lint on the cauterized spot, and then, by means of a long narrow strip of plaster winding round the toe from the unaffected side, fixes the pad firmly in its place, at the same time directing its pressure *from* the nail. Under this treatment, well carried out, he finds cicatrization soon takes place. Absolute rest is enjoined. The nail requires to be kept carefully trimmed.

Mr. Croft has just cured, by the radical plan, the brother of a girl who had suffered from in-growing nail in both great toes. The second toe became affected some months after the first had been cured.

University College Hospital.—Mr. Christopher Heath has never seen any good result from paring the centre of the nail, or applying caustic to the exuberant granulations overlying its margins. He has always found the simplest and most satisfactory method of treatment to be, to take a narrow slip of the nail away with the scissors and forceps, taking care to extract the whole depth of the nail, which is not always easy owing to the sodden condi-

tion in which the tissue has been kept for a length of time, by which it is rendered very friable. When the edge of the nail thus extracted is examined, it almost always presents a rough serrated margin, and it is this which causes the irritation. After the removal of the source of irritation the use of careful dressing, with lint gently pressed down by the side of the nail, is necessary to repress the granulations, and the use of a lotion of nitrate of silver or sulphate of copper (two grains to the ounce) has been found very advantageous. Mr. Heath finds it necessary to warn patients who have suffered from in-growing nail to wear wide toe boots, and to keep the sulcus between the nail and the flesh clear of epithelium. They should be careful also to apply for relief the moment they feel uneasiness from the nail, when a perfectly painless removal of a small portion of the nail prevents further mischief.

In inveterate cases, where the nail and toe are deformed, the former being very much in-curved, Mr. Heath recommends the removal of a slit of nail on each side, and the destruction of the corresponding portions of matrix, under chloroform, either by removal with the scalpel, or the application of the actual cautery. This lays the patient up for a few days, but effects a permanent cure. Mr. Heath believes that it is never necessary to remove the entire nail, by splitting and evulsion, as is often recommended.

Westminster Hospital.—Mr. Francis Mason has had under his observation at this hospital during the last few months an unusually large number of cases of in-growing toe-nail. Mr. Mason believes that the plan ordinarily recommended of cutting the toe-nails as we do the finger-nails—that is, of rounding their corners—often induces the condition it is intended to obviate. He has generally found that the so-called in-growing toe-nail has been primarily caused by injury in trimming the nail. Too much of the corners is removed, and a sensitive and occasionally bleeding surface is left. The patient will soon after perhaps wear a tight boot, or possibly may take a long walk. In the act of walking, the tender surface is pressed up against the slowly-growing nail, causing increased irritation, and giving rise to those painful granulations invariably seen, in different degrees, in such cases. Mr. Mason therefore advises that the free edge of the toe-nail should be cut square. Respecting the treatment of in-growing toe-nail, the plan which Mr. Mason has most confidence in is this: A sharp-pointed stick of solid nitrate of silver is applied with some vigor to the base or under-surface of the painful granulations, and a small piece of dry lint, or lint dipped in black mercury lotion, is then carefully inserted, and the whole toe surrounded with water dressing. An astringent or other lotion, according to circumstances, may be subsequently employed. The highly sensitive surface is thus destroyed, and the patient is enabled to attend to his business in comparative comfort. Such a plan of treatment has been found uniformly successful in Mr. Mason's hands, and he believes that occasional apparent failures are due

to the method not being thoroughly carried out. It should be remembered that it is useless merely to touch the surface of the granulations with the caustic; the base is the part to be attacked. If the operation be efficiently performed, it is doubtless attended with considerable pain for the moment; but the pain is reduced to a minimum by the use of the ether spray, and especially if the caustic be well pointed, instead of being, as so often happens, broad or angular at the extremity. Evulsion of the nail is seldom required for this condition, being more suitable—indeed necessary, combined sometimes with the free application of the strong nitric acid—in cases of disease of the matrix, questionably entitled “onychia maligna,” which is not unfrequently met with on the fingers of unhealthy and ill-fed children.—*Lancet.*

Accidental Wound of an Artery during an Operation for Vesico-Vaginal Fistula; Fatal Result.

M. Paul Horteloup communicated the case to the *Société Impériale de Chirurgie*. He was operating at the Hopital Beaujon for vesico-vaginal fistula, and was just making the last cut with the bistoury when a jet of blood struck his face, and the vagina was filled at once by the haemorrhage. Neither ice nor the tampon stopped the flow, which, was, however, controlled by seizing the posterior lip of the fistula with a screw forceps and a polypus forceps. The tampon injections of ice water into the bladder, compresses wetted with cold water to the abdomen, were used, and wine, beef tea and ice administered. A few days after, the forceps were detached in the movements of the patient, and a new haemorrhage set in, to be controlled as before, with the forceps. The patient, however, had lost so much blood that she sunk five days subsequently.

At the autopsy there was found general acute peritonitis, and a division through two-thirds the diameter of the left utero-ovarian artery.—*Boston Medical and Surgical Journal.*

Pulverized Ether in the Reduction of Hernia.

M. DEMARQUAY long since showed the utility of pulverized ether in preventing pain during the operation for hernia, and M. Chavergnac now brings forward seven or eight cases to show that this agent may be usefully employed in obtaining the reduction of hernia without operation. The anaesthetic effect of the vapor allows of the performance of taxis without pain, save a disagreeable sensation of burning in the parts in contact with the ether. It is, however, the intense chilling produced by the pulverized ether, so much greater than that produced by merely

pouring the fluid on the parts, that is the important feature. Its suddenness leads to the rapid condensation of the gases enclosed in the strangulated intestine and the diminution in volumes of this. Its effects are superior to those produced by ice, because the vapors of the ether come in contact with every part of the tumor, and while ice slowly reduces the temperature from 6° C. to—4°, in less than a minute *rectified* ether lowers it to—15°. Sometimes these effects, owing to the great heat and tension of the parts, are not produced immediately, and the application then has to be repeated two or three times.—*Presse Delge*, May 9, from *Abeille Méd.*—*Medical Times and Gazette*.

Rabies Canina.

M. Méneclier, in a recent prize essay, observes that his observations and experiments lead him to the conclusion that we are not to expect to find rabies in the half-starved wandering curs of our streets, which, however defective their other sanitary conditions may be, at least have abundance of fresh air and exercise. The victims of the disease are commonly pampered pet dogs, far too well fed and too little exercised; and too stringent police regulations, by compelling greater restrictions being placed upon these animals, and keeping them more indoors, will only have the tendency of increasing the number of cases of hydrophobia.—*Gaz. des Hôp.*, March 2d.

Carbolic Acid and Hospital Mortality.

To the Editor of the *Medical Times and Gazette*: Sir—In answer to your correspondent who inquires as to the effects of carbolic acid on the statistics of Hospital mortality, I would beg to refer him to the annual reports of the Glasgow Royal Infirmary, the last of which, for 1868, has just been published. If he will take the trouble to calculate the mortality from the primary and secondary amputations of the thigh, leg, arm and forearm before and after the introduction of carbolic acid into that Hospital, he will find that the results are not in favor of the so-called antiseptic plan of treatment. In the years 1860, 1861 and 1862—before the introduction of carbolic acid—I find 126 of the amputations I have mentioned recorded. Of these 126 there died 41, which gives a mortality of 1 in 3. On the other hand, in the years 1867 and 1868—or since carbolic acid has been used so extensively in that Hospital—there were 73 amputations of the same kind. Of these 30 died, giving a mortality of 1 in 2½.

The results are even more unsatisfactory if we take the com.

compound fractures, which are the cases reported to be most benefitted by the carbolic acid treatment. I find in the three years already mentioned that there were 114 compound fractures treated in the Infirmary, of which 26 died, or nearly 1 in 4½. In 1868—a year in which, as I have been told, all the Surgeons to the Hospital used carbolic acid—there were 59 compound fractures treated with a mortality of 20, or more than 1 in 3. Your correspondent may digest these data at his leisure.

I am, &c.,

M. D.

Electro-Puncture in Thoracic Aneurism.

IN the *Gazette Medica Italiana-Lombardia* for October 31, Dr. Ciniselle relates a case in which electro-puncture was employed in the case of an aneurism of the ascending aorta, occurring in a man of good constitution, 46 years of age. The report comes down to the seventy-fourth day after the operation, by which time the patient had apparently quite recovered, and returned to his employment.—*Medical and Surgical Reporter.*

Results of Transfusion.

Professor Landois, of the University of Griefswald, who has interested himself much in the subject of transfusion, after giving a critical account of the most recent publications on the subject, thus sums up, in a recent number of the *Wien. Med. Woch.*, the results that have had hitherto been obtained : 1. Transfusion has been performed ninety-nine times in cases of haemorrhage, in eleven of which cases no successful result was even possible. Of the remaining eighty-eight cases, sixty-five were attended with success, twenty were unsuccessful, and in three the result was doubtful. 2. It has been performed twelve times in cases of acute poisoning, one of these being hopeless. In three the results were favorable, and in eight unfavorable. 3. For various forms of disease, attended with exhaustion, it has been resorted to forty-three times, the most unfavorable prognosis having been frequently delivered. In these the results were favorable in twelve, unfavorable in twenty-one, and doubtful in nine, while in one it was a mere desperate experiment. Prof. Landois observes that these statistics speak very satisfactorily for transfusion, and that the results would be far more favorable if this almost harmless operation were not usually driven off to the last minute.—*Medical Times and Gazette.*

QUARTERLY RECORD OF OBSTETRICAL SCIENCE.

COLLATED BY JOSEPH HOLT, M. D.

Concerning the Action of Opium upon the Uterus, and Particularly as a Parturient Agent: By P. C. BARKER, M. D., Morristown, N. J.

"PARTURITION consists in the expulsion of the foetus and its appendages from the cavity of the uterus, and ends in the separation of the child and the mother" (Churchill). It is accomplished by means of non-striated contractile fibres, which are practically muscular, and constitute what is generally termed "the muscular coat of the uterus." These fibres are arranged in longitudinal, oblique and (circular) transverse directions. The first two predominate in the body, and the latter in the cervix, and particularly in the "os uteri externum."

Before the expulsive contractions commence which terminate the process, these circular fibres should relax, and the "os" become widely dilated; but irregular contractions of the different sets of fibres, or contractions of the circular alone (constituting false pains), or rigidity of the "os uteri," due to tonic contraction of its circular fibres, often prevent this physiological dilatation, and prove the source of great distress to the patient and annoyance to the obstetrician.

It was in a case of this character that I discovered in opium a valuable parturient agent. I will narrate a few cases, which will illustrate how it became manifest to me:

CASE I.—Mrs. H., about twenty-five, a strong and healthy woman, primipara, was taken in labor two P. M., July 15, 1862. Saw her soon after. Pains frequent, and of moderate severity; os dilated sufficiently to admit the point of the index-finger. Head presenting in first position. Left her for half an hour, and upon returning found her condition unchanged. Visited her at intervals until late in the evening, when, no progress having been made, ordered antimon. et potass-tart., gr. one-eighth, every half hour. Went home, leaving directions that I should be sent for if any change occurred. Messenger came for me about two A. M., 16th. No further dilation. She complained very much of the severity of the pains. Tartar emetic, gr. one-fourth, every half hour. No improvement resulting, and nausea being constant, it was discontinued in the morning, and a stream of warm water was thrown upon the os, by means of a Davidson's syringe, for half an hour. This was repeated three times during the morning.

TWO P. M.—Still no dilation. Patient a little feverish, and complaining of being very tired and sleepy. Ordered morph. sulph., gr. one-fourth, and left her to get a little sleep, while I went to attend to other engagements. Returning about an hour after, I found mother and child comfortably asleep side by side. About half an hour after taking the morphine she had a hard expulsive

pain, and before any one could leave the house the child was born. The pains had not changed in character until just before the termination of the labor, nor had she been asleep.

CASE II.—Mrs. O., thirty-five, multipara. Previous confinements easy. Taken in labor with her fourth child, November, 1863. Pains of same character as in Case I. for sixteen hours, producing little dilatation. At one A. M. gave morph. sulph., gr. one-third, hoping to quiet the pains. Left for home, a short distance away, and retired at once. Just as I was getting asleep, a messenger came for me in hot haste, stating that the child was born. Hastily dressing, I returned in time to remove the placenta. Less than three-fourths of an hour had elapsed since I quitted the house. She had but one pain, of different character from those which had tormented her so long unavailingly, previous to taking the morphine.

CASE III.—Mrs. W., about twenty-four, primipara, sent for me early in the evening. Being absent from home, my former partner, Dr. F. D. Leute, of Cold spring, N. Y., answered the summons. Upon my return, I went to relieve the doctor. There was no dilatation, although the pains had been recurring for some time. We gave her morph. sulph., gr. one-fourth, and went home, giving directions to send for me should any change occur.

On the following day, I learned that about half an hour after our departure she was seized with severe expulsive pains, which terminated the labor before a messenger could be dispatched after me.

It is obvious that morphine was given in these cases, as it is usually given by the profession, if at all, with the intention of obtaining a respite from the pains, in the hope that when they returned they would be more efficient. I was surprised in each case at the result, although in the first I attributed it to the repeated use of the warm douche, from its recognized power in certain cases of this character. In the succeeding case I was obliged to look for a different explanation, and at length concluded that the morphine increased the expulsive power of the body of the uterus to a degree sufficient to overcome the circular fibres and connecting tissues of the "os uteri." Further light was thrown upon the subject by the following case:

CASE IV.—Mrs. G., twenty-eight, multipara. In labor a number of hours. Os uteri remaining about half dilated, and rigid. Gave morph. sulph., gr. one-fourth. About half an hour after, while making an examination during a pain, my first and second fingers being applied to opposite sides of the os, in order that I might observe the effect of the pain upon its hitherto unyielding tissues, I was surprised to feel it easily dilating.

In this case I suspected that while opium stimulated the fibres of the body of the uterus (longitudinal and oblique), it also relaxed the circular fibres of the os. Further observation, in a large number of cases of varied character, has convinced me that opium, instead of having a general anodyne effect upon the

uterus, possesses this special power as a parturient agent. I say general anodyne effect, for while it sometimes quiets uterine contractions (witness its universal use for this purpose), yet it is in those cases in which the circular fibres are called into action alone, or where the longitudinal and oblique fibres contract irregularly—in short, in *false pains*. I am fully persuaded that *opium never does nor can arrest a physiological labor*.

I have many times been called to cases in which pains have returned regularly and with increasing intensity for a number of hours without producing dilatation to any extent, and after giving a full opiate have had the satisfaction of finding a marked improvement after sufficient time had elapsed for its absorption, the patient having even harder contractions with less distress than before, and the os uteri being speedily dilated.

During the first stage of a physiological labor, I believe that the circular fibres of the os are passively relaxed; and that the active, usually gentle, contraction of the fibres of the body of the uterus serves to overcome the resistance which the tissues of the cervix and os present to dilatation.

Now, if the circular fibres of the os retain their tonicity, or if they contract with those of the body during a pain (and I have felt them contracting in a number of cases), no dilatation can be effected; or, at any rate, it will be with great difficulty, and the resulting distress will be greater than when they offer only the minimum amount of resistance.

The cases above narrated and referred to, have taught me that opium possesses the power of relaxing the circular fibres, at least of the os, and of stimulating the longitudinal and oblique fibres into active contraction. It is upon these principles that opium is exhibited in dysmenorrhœa, when it is dependent upon spasmodic contractions of the circular fibres; or where it is owing to the presence of "menstrual decidua," clots, etc.

In abortions it is an invaluable remedy, facilitating dilatation, diminishing haemorrhage, promoting the expulsion of the placenta, and lessening suffering.

Ergot, on the other hand, by causing contraction of the circular fibres, retains the placenta, and therefore should rarely be given (in abortion) until after the foetus and secundines have been expelled.

Placenta Prævia.—I have used opium in three cases of placenta prævia, one at the sixth month and two at term, saving the mother in each instance. In another case I attempted to turn, but, having made an erroneous diagnosis as to position, the placenta being planted directly over the os uteri, I introduced the wrong hand, and, failing to get hold of the feet properly so as to bring them down, I detached the (entire) placenta rather than lose time by changing hands. I mistook a R. Occip. Post. for a L. O. Anter. position. The haemorrhage ceased at once, and the mother subsequently did well.

I think that opium meets two important indications in *placenta præaria*: 1. It facilitates dilatation, thus shortening the period of greatest danger. 2. It promotes the expulsive power of the uterus. It also serves to lessen haemorrhage by a special haemostatic action.

It is an interesting fact that, in one of these cases, when the respiration was reduced to four in the minute by cumulative action of the opium, which had been too frequently repeated by mistake, the uterus expelled the child with one pain, thus illustrating my statement that opium does not possess the power of arresting normal uterine contractions.

Hour-Glass Contractions, etc.—While hour-glass, cylindrical, or other irregular tonic contractions of the uterus (particularly those which occur after the expulsion of the foetus) may be (and doubtless are sometimes) spontaneous, still in my experience they have always seemed to be due to ergot. Since I have learned the special power of opium, as set forth in this paper, I have used it in these cases with invariable success, although some of the most approved obstetric authorities say such use "is objectionable."

I will give the following cases in point:

CASE V.—December, 1864. Mrs. McD., aged about thirty-eight. Primipara. Labor progressed steadily until the head had fully distended the perinæum. Retrocession followed every pain, and, as they were neither strong nor long, no progress was made. The vulva too, was well dilated, and I gave f 3 iss. Squibb's fl. ext. ergot to complete the delivery. Fifteen minutes afterward the peculiar contractions produced by ergot commenced, and the child was soon born. Placing my hand upon the fundus of the uteruses (it having been pressed upon by the hand of an assistant while the child was being delivered and the funis tied and severed), I discovered it to be much elongated, reaching above the umbilicus; and, making a vaginal examination, found the placenta to be beyond the reach of my fingers, and, introducing the hand, discovered it so tightly grasped by an hour-glass contraction that I could not remove it. Gave morph. sulph., gr. one-third, noting the time. A little less than half an hour afterward I was awaked (having fallen asleep from great fatigue) by a contraction of the uterus under my hand. The placenta was expelled with considerable impulse, and the uterus contracted down almost entirely below the os pubis (which, by the way, judging by my experience, it seldom does, teachers and text-books to the contrary notwithstanding).

CASE VI.—Mrs. S., multipara. A delayed labor dependent upon insufficient pains. Gave f 3 iss ergot. The child being born, I delivered the placenta at once (as I now invariably do after giving ergot). A cylindrical contraction immediately followed, the fundus rising considerably above the umbilicus, in fact almost as high as the ensiform cartilage. The cylinder was about three inches in diameter, firmly and uniformly contracted. An opiate was given, and in due time a permanent globular contraction followed.

Dr. J. D. Trask, in his essay upon "Rupture of the Uterus," published in the *American Journal of Medical Sciences*, January and April, 1848, gives four cases of rupture of the uterus due to ergot. Malgaigne and others have reported similar cases. The following case is given to show how this accident *might* be produced in a diseased or even very powerful uterus, as well as to illustrate the apparently antagonistic effects of ergot and opium upon the gravid uterus.

CASE. VII.—Mrs. M., multipara about thirty-five. Previous confinements easy. Present labor not worthy of note until the os was nearly obliterated, a ring only being left, when dilatation was for some unknown reason arrested, and no progress made for an hour. The uterine contractions then becoming efficient, gave 3iss ergot. As soon as the pains peculiar to ergot began, I made an examination, and found the os less dilated than before, and its fibres contracting with those of the body. Gave one-third gr. morph.-sulph. Within half an hour the pains had become more like those of a "physiological labor," the os uteri relaxed and became dilated, and the expulsion of the child speedily followed.

I gave opium in this case, with the expectation that it would produce a relaxation of the circular fibres of the os. It seems to have exerted this power in opposition to ergot as effectually as in the "hour-glass" and other irregular contractions above mentioned.

It may readily be seen that the simultaneous action of the ergot upon the os and body *might* have caused a rupture of the uterus. The contractions produced by ergot are continuous. I have often observed, however, that they have not been general, but have occurred in different sets of fibres successively. Herein lies one great danger of its use. In these, as well as all other irregular contractions of the uteris, I find opium a *prompt and reliable remedy*. In fact, I now use it in those cases of delayed labor dependent on inefficient uterine contractions, instead of ergot.

This property being established, the administration of opium admits of wide application in uterine therapeutics. In dysmenorrhœa, abortion, irregular contractions of the uterus of all kinds, previous, during, and subsequent to labor, and in placenta prævia as an adjuvant to Barnes's dilator, it will be found to be a valuable remedy; more certain in desired action (when given under proper indications) than any other remedy in our profession. Such at least it has been in my hands in quite an extensive obstetric experience.

In dysmenorrhœa, opium is given to quiet the contractions of the circular fibres (when this variety is present). In abortion, it is administered in the hope that the pains are caused by irregular contractions; and, if there is no dilatation (producing a partial separation of the membranes), it will often prove successful. If, on the contrary, the process has progressed so far as to

render abortion inevitable, opium promotes it by relaxing the circular fibres of the os. It may appear at first strange to hear such apparently opposite properties ascribed to a remedy; but there is no inconsistency in the statement. The irregular (colicky) contractions do *not* constitute abortion, but they may produce it; and there is much less risk in a temporarily relaxed os uteri without pain, than in a normal condition of the os with contractions of any kind in the body. In the "irregular contractions" at term (as in Cases V., VI., and VII.), it acts promptly.

I will state that cases might have been multiplied to a large number illustrating this subject; but the practical value of my paper would not have been enhanced at all, as the cases selected are as well or better-marked instances, each of its kind, than any others recorded by me since I commenced my observations seven years ago. (I had previously observed its powerlessness in quieting physiological uterine contractions, in the lying-in wards of Bellevue Hospital, while an interne).

With respect to the mode of administration, I am not aware that it makes any difference what preparation of opium is used. I have generally employed solid opium pills, grs. one to three, or morph.-sulph. gr. one-sixth to one-half (the latter given dry on the tongue if nausea is present) at term. In abortion, if seen early, I give enemas of corresponding strength, usually employing from 5ss to 3i doses of tinct. opii in a tablespoonful of warm water, to be repeated after three hours if the pains continue, or later, if they return after being quieted. If abortion can not be prevented, the hypodermic syringe and Barnes's dilator or tampon are preferable. I have not used the hypodermic method at term, having been satisfied with the more gradual effects of administration by mouth, and besides I have thought that perhaps its rapid absorption into the maternal circulation *might* be injurious to the child. I have never observed any such effects following the administration by mouth. And, what is very singular, it seldom induces somnolency in the mother.

There are cases in which the os uteri (from previous inflammation) is almost, and sometimes entirely, undilatable, over which opium (in common with all other known therapeutic agents) exercises no control, and for which the knife is the remedy.

In conclusion, it will be seen that the theory set forth in this paper explains phenomena in the action of opium upon the gravid uterus which have hitherto, from the time of Denman to the present, been regarded as exceptional; and that it established the value of this remedy as a parturient agent.

My object in calling the attention of the profession to these particular and very useful properties of opium has been, the promotion of a wider knowledge, and a more general application of them in practice; and I feel assured that, if opium is administered in the conditions and doses above indicated, it will not disappoint the obstetric practitioner.—*New York Medical Journal.*

Notes of a Case of Uræmic Convulsion Occurring During the Last Month of Pregnancy—Recovery : By F. R. FAIRBANK, M. D.

H. M., aged twenty-six, single, one of a family which does not bear a good name for chastity. Lives with her mother, with whom she is on good terms. Five years ago gave birth to a child ; the labor was natural. She had never suffered from any form of convulsions until the present attack, nor had any other member of the family.

On March 27, 1869, I was requested late in the evening to see her, as she had been suffering during the latter part of the day from fits of convulsions. On arriving at the house I found that, for the previous ten days, she had been suffering from a severe attack of parotiditis, that she was nine months gone in pregnancy, and that she had been exposed to a very cold wind the day before I saw her. She was lying in bed unconscious, with pupils dilated and fixed ; breathing easy, tongue much bitten, swollen, and protruding from the mouth ; head cool, and lips a natural color ; pulse 70, compressible and irregular. The urine was reported thick and scanty. She had had several fits of convulsions during the afternoon and evening ; they came on whenever she was disturbed. She remained unconscious between the attacks, but could be easily partially aroused. There were no signs of labor. I ordered a grain of tartar emetic, and five minims of tincture of opium in an ounce of water to be taken every hour, and the feet to be kept in hot water for twenty minutes, also to take plenty of hot tea to induce free action of the skin.

On the next day, March 28, I found her in much the same state as when I last saw her. She had a severe fit during the night. Pulse 70. Towards evening she passed about twelve ounces of urine, which was very turbid and brown, having much the appearance of *café au lait*. It was imperfectly cleared by heat, then became nearly solid, with a dense deposit of albumen ; specific gravity, 1029. Under the microscope it was seen to be loaded with blood-corpuscles, renal epithelium, and a few transparent tubular casts. This was the only urine she had passed during the twenty-four hours, with the exception of a small quantity passed involuntarily during the convulsions. The tartar emetic did not produce sickness ; six grains were taken in the manner above mentioned ; the quantity was then reduced to half a grain every four hours, and mutton broth was given frequently.

March 29.—Much more conscious. Pulse 65, almost imperceptible at the wrist. Very giddy when raised. Urine passed freely, clear and yellow ; specific gravity, 1014. Heat produced a light flocculent cloud of albumen. Ordered bromide of potassium, ten grains ; carbonate of ammonia, two and a half grains in an ounce of camphor water every three hours. Also a little wine occasionally.

April 2.—Much improved in strength. Urine still contained albumen, blood-discs, and epithelium ; specific gravity, 1012.

Had no recollection of having been seriously ill. Movement of the child *in utero* felt frequently.

On April 15 she was safely delivered of a fine healthy male child at 1.30 A. M. The labor was natural. When seen at 11 o'clock the night before, the os uteri was fully dilated and the membranes unruptured, the head presenting. In order to expedite the labor, the head being delayed in the brim of the pelvis, I administered three twenty-minim doses of liquor secalis cornuti, with an interval of a quarter of an hour between each. This speedily had the desired effect, with the result above named.

Convalescence was rapid and complete. The milk began to flow on the third day after delivery. The urine remained albuminous, with a specific gravity 1012, until after the confinement. There was no œdema in this case.

Remarks.—This case is a good example of one form of puerperal convulsions—that resulting from disturbance of the functions of the kidneys. From the history of the case it is probable that this woman had been suffering from albuminuria for some time previously, and that the exposure to cold during the occurrence of a febrile attack brought on acute congestion of the kidneys with suppression of secretion. The convulsions did not recur after the flow of urine was re-established, although it remained albuminous until after parutrition. The birth of a live child under such circumstances is, I believe, sufficiently uncommon to be worthy of note.

Lynton, North Devon.—*Medical Times and Gazette.*

QUARTERLY RECORD OF PRACTICE OF MEDICINE.

COLLATED BY S. M. BEMISS, M. D., PROFESSOR OF PRACTICE OF MEDICINE, ETC.,
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On the Therapeutical Action of Sambucus Canadensis in Albuminuria: By ROBERT McNUTT, M. D., of Marshall, Mo.

CASE I.—In 1861 the most prominent physicians in Saline and the adjoining counties were consulted by Mrs. S., aged about seventy-five, who was suffering from general dropsy, the result of chronic Bright's disease. Their treatment continued for many months, but afforded no relief; she had hydrothorax and œdema of the lungs, and was considered to be incurable. Some of the neighbors visiting this old lady, told her of cures of dropsy effected by the use of the inner bark of the common elder, steeped in hard cider. Accordingly a quantity of the elder was obtained, the bark scraped off and put into a large bottle, and hard cider poured over it. This preparation was used in ounce doses three or four times daily. In a few days improvement was

quite marked, and she convalesced rapidly. She has never been sick since that date up to the present time, March 16, 1869.

CASE II.—*May 1, 1867.* Was called to see Lillie S., aged seven years, who had always enjoyed good health, and was free from any hereditary taint of gout or scrofula. She had never had scarlet fever. Her mother stated that for weeks past she had noticed Lillie's limbs to have been swollen. Her face was quite puffy, and pitted on pressure. She complained of a rheumatic feeling in her limbs; was quite pale; appetite not bad; bowels constipated; urine scanty and high-colored. Prescribed a saline cathartic, and the use of cream of tartar and juniper-berry tea.

5th.—Worse; prescribed pulv. digitalis gr. one-fourth; pulv. scillæ gr. jss, with potass. bitart. every four hours. The urine on testing with heat and with nitric acid, showed the presence of a large amount of albumen. Not having a microscope, could not ascertain whether there were any epithelial cells, or casts of the tubuli uriniferi. The urine was smoky colored, and showed traces of blood, and, on standing a few hours, a large amount of sediment was deposited.

8th.—Much worse; albumen in the urine increasing; abdomen very large. Ordered the entire body and limbs to be tightly bandaged with flannel; gave bitartrate of potassa in sufficient doses to purge, and a pill composed of calomel, squill, and digitalis.

11th.—Symptoms all aggravated. Ordered: R. Spts. æth. nit. fʒi; syr. scillæ fʒjss; ant. et potass. tart. gr. ij; pulv. gambogia gr. viij. M. S. A teaspoonful every three hours.

14th.—No improvement. Continued treatment with the use of acetate of potassa several times daily.

17th.—Cutaneous surface distended to its utmost extent; urine more smoky, and showing more traces of blood than heretofore; largely albuminous. Treatment so far quite unavailing. Gave an unfavorable prognosis, and requested a consultation.

18th, 19th, and 20.—No better; continued treatment, but gave her medicine every two hours. Appetite by this time had gone; eyes closed by the œdema of lids.

21st.—Met Dr. Benson, of Miami, in consultation, who recommended, in addition to the articles already used, creasote and Lugol's solution, which afforded no relief. At midnight I was sent for in great haste, as the girl had violent spasms. Her mother stated that she had been stupid for several hours. Found her laboring under uræmic coma and convulsions. The latter were almost incessant; pulse about 140. Pupils of the eyes could not be seen, so great was the œdema of the lids; breathing short and rapid. There seemed to me to be considerable hydrothorax and œdema of the lungs. Recovery seemed hopeless, but, acting on the principle that "while there is life there is hope," I determined to place the patient in a hot bath immediately, and to give ipecac and tartar emetic to procure prompt emesis. The

spasms were soon relieved by these measures, and by morning I had the satisfaction of finding that the coma had disappeared.

22d.—No diminution of the amount of albumen in the urine. Ordered the following: R.—Syr. scill. f $\frac{3}{4}$; tr. verat. virid. gtt. j; pulv. ipecac gr. j; ant. et potass. tart. gr. one-fourth every two hours, unless vomiting is produced, and in that case a dose every three or four hours. Slight diaphoresis was obtained, and it seemed to me that the symptoms were not quite so distressing as they had been for several days previously. I was convinced, however, that the relief was only temporary.

23d.—At my request Dr. M. W. Hall, a physician of great reputation in the country, met me in consultation. He advised the following combination of diuretics: R.—Potass. bitart. $\frac{3}{4}$ jss; potass. nitrat. $\frac{3}{4}$ ss; pulv. scillæ maritim. ij; pulv. digitalis gr. xxx; ant. et potass. tart. gr. ij.—M. S.—A teaspoonful of the powder four or five times daily. He also mentioned the cure of Mrs. S. by the use of hard cider and elder bark, and thought it might be worth while to give it a trial, remarking that he doubted benefit being obtained in this case by any remedies; in which opinion I fully conceded. However, I was like a drowning man grasping at a straw. I had the bark and hard cider immediately obtained, and I saw that it was regularly administered.

26th—Albumen in urine diminished; less sediment and less appearances of blood in the urine; abdomen not quite so large. Continued treatment.

29th.—The amount of albumen in urine remarkably diminished; dropsical condition rapidly subsiding.

June 1.—Increase the amount of hard cider and elder bark, and diminished the potash prescription. The albumen in urine still decreasing.

14th.—Could detect scarcely any albumen in the urine. Changed the prescription to tinct. ferri. chlor. and quinia, and continued the hard cider and elder bark. In a week or ten days more, all medication was discontinued. Lillie S. has not been sick since.

CASE III.—April 22, 1868. Was sent for to see Miss Molly H., aged eleven years. In the winter she had had scarlet fever, and, as a sequel, dropsy. She had been skilfully treated by an old and experienced physician, but the parents not being satisfied, sent for me. For eight days I treated the case with the usual remedies. The hot-air bath caused diaphoresis, and afforded apparent relief. The urine was tested every day, and the amount of albumen seemed steadily to increase.

May 1.—Patient worse in all respects. Prescribed pulv. ipecac., pulv. gambogiae, $\frac{1}{2}$ gr. one-half; potass. acetat. gr. xx; syr. scill., spts. aeth. nit. $\frac{1}{2}$ gtt. xx, to be taken every two hours, unless it purge. Also a tablespoonful or two of the infusion of the elder bark in the hard cider every two hours, with the hot air bath night and morning.

4th.—No albumen in urine; dropsical effusion all gone. Di-

rected that the bark and cider be continued for some time. This girl has not been sick since.

In the late editions of the *United States Dispensatory*, Sambucus is stated to be a hydragogue cathartic and emetic. It has not proved so in my hands. Dr. Hall says it has caused neither vomiting nor purging in any experiments that he has made with it. This may be owing to the hard cider extracting only certain principles from the bark. I have sometimes thought that the hard cider alone might act as a potent therapeutic agent in the cure of albuminuria. The cases which I have had were so urgent, and I was so solicitous about them, that I did not dare to waste time by experimenting. In subsequent consultations with Dr. Hall he has expressed the belief that the green bark of the sambucus is singularly potent in correcting the physiological condition which leads to the development of albuminous nephritis. I would now approach a case of albuminuria with as much confidence of curing it by the means used in the cases here given, as I would an ordinary ague by means of sulphate of quinia.

I believe, however, that the sambucus canadensis will be found of use only in cases of albuminuria not complicated with cirrhosis of the liver or structural lesions of the valves of the heart. Its action, so far as I have tested, is only to correct that morbid condition which results in the elimination of albumen by the kidneys. There is one remark worthy of note, and that is, that whatever may have been the structural changes in the kidneys, recovery in all the cases has been complete, and the cases seem to have been exempt from ordinary ailments since.

Should a more extended trial establish the efficacy of this remedy in Bright's disease, whether acute or chronic, all that is desired by the publication of this article will have been accomplished.

[The above cases appear to very conclusively show the therapeutic value of Sambucus Canadensis in albuminuria, and fully justifies the remark of Prof. Stillé (*Therapeutics and Materia Medica*, 3d ed., p. 552) that this article "certainly deserves to be resorted to more frequently than it has been." Prof. S. (o. c.) states that Sydenham, Boerhaave, Gaubius, and Desbois de Rochefort, used the inner bark of the Sambucus advantageously in many cases of dropsy; and that other cases have been treated with equal success by Hospital, Bonnet, Bergé, Mallet, Reveille-Parise, and Fauvre.—ED.]—*American Journal of the Medical Sciences*.

Diabetes Treated with Carbonate of Ammonia, Administered Largely :
By F. W. PAVY, M. D., F. R. S.

IN a recent number of the British Medical Journal, I referred to a case of diabetes mellitus, that I was treating with carbonate of ammonia, administered to a larger extent than is usual; and I

promised, a little later, to send for publication an account of the result. This I now propose to do. The history of the case is drawn from the notes furnished to me by my clinical clerk, Mr. W. B. Taylor.

William F., aged fifty, No. 2, John Ward, Guy's Hospital, admitted March 24th, 1869, a married man, by occupation an engineer on board a steam-vessel, plying between London and Yarmouth, states that about two years ago he noticed that he was losing flesh rapidly, and becoming very weak, and that at the same time he experienced an unusual amount of thirst and hunger, and passed a large quantity of water. The medical man whom he consulted told him he was suffering from diabetes, and sent him to Guy's Hospital, where he was admitted and remained for six or seven weeks. During this time he much improved, and upon his discharge passed between three and four pints of urine in the twenty-four hours, which was much less than he had formerly voided. He afterwards attended for three months as an out-patient, and still continued improving. Whilst under treatment, and for some time afterwards, he kept to a restricted diet; but about a year ago he resumed an ordinary mode of living, except that he avoided sugar, and only partook of potatoes occasionally. He also resumed his employment, and continued well up to a week before Christmas last. At this time he was shipwrecked at Yarmouth, and narrowly escaped being drowned. Two days afterwards, he noticed a return of his old symptoms; his urine began to increase in quantity, and he became again very thirsty. He resumed his former diet, but his complaint unabated, and finding himself daily getting thinner and weaker, he applied for admission into the hospital.

It is interesting to notice that after the complaint had been subdued and kept under for several months, a return of it in a state of severity seems to have been brought about by the shock received from his exposure to shipwreck. It is a fair conclusion, I think, that this was so, and it agrees with what I have noticed in other cases. I have long been of opinion that the complaint is susceptible of being influenced in a marked manner by mental states.

For the first few days after admission into the hospital, the patient was put upon a mixed diet. The quantity of urine ranged from eight to ten and a half pints *per diem*, and the sugar from 6,000 to 8,000 grains. Without change of diet at first, he was ordered to take 100 grains of carbonate of ammonia during the course of the twenty-four hours. It was dissolved in a pint of water, and administered in small frequently repeated portions. The effect to begin with was to cause an increased quantity of urine to be passed, but the proportion of sugar being rather diminished, the quantity for the twenty-four hours remained about the same; a decided influence was exerted upon the cerebral functions. The patient felt giddy, stumbled, and upon one occasion almost fell in walking; and had dimness of sight,

with occasional bright flashes before his eyes. He also experienced a feeling of sickness, but there was no actual retching or vomiting; and notwithstanding the feeling of sickness, he was able to take his food as usual.

On account of these symptoms, it was only for two days that the 100 grains of carbonate of ammonia were continued; on the third day, 90 grains were taken, and the next day it was taken off altogether, and aqua camphoræ given instead. The patient was also now placed upon a restricted diet, which, as is usual, brought down the quantity of urine and sugar in a very notable manner.

In ten days' time, the carbonate of ammonia was administered again. During the first day, 75 grains were taken, and then, as before, 100 grains. This time no particular inconvenience was complained of, and the patient was ordered to persevere with its employment. The first day, the urine was higher in quantity, and continued afterwards rather higher than it had been, although the sugar remained for a while about the same. Then, whether from the effect of the restricted diet or carbonate of ammonia, the sugar disappeared altogether, and after it had been absent for about ten days, the carbonate of ammonia was again taken off, and camphor-water given instead. The urine immediately rather fell in quantity, and remained devoid of sugar. After a lapse of nine days, a little ordinary bread—at first two ounces, and the four ounces, *per diem*—was allowed, and still the urine continued for a time free from sugar. Later, however, sugar reappeared, but not to any great extent. Again the carbonate of ammonia was given, and again an increase in the quantity of urine was noticed. For a few days the amount of sugar passed underwent no material change; subsequently, however, it again disappeared.

Looking at the facts of this case, taken altogether, it would certainly seem that the carbonate of ammonia exerted a controlling influence over the disease. No immediate and decided effect, however, of the kind that is produced by the administration of opium was traceable.—*British Medical Journal*.

Niemeyer on the Relation of Hæmoptysis to Phthisis. Translated
by HENRY TUCK, M. D., Boston.

F. NIEMEYER, in a recent article in the *Berlin Klin. Wochenschr.* (Nos. 17 and 18, 1869), entitled "Some Remarks upon the Relation existing between Hæmoptysis and Phthisis," makes the following statements, as embodying the result of his study and experience.

1. Most, though not all, patients, who suffer from capillary, bronchial or parenchymatous hæmorrhage of the lungs, are either already phthisical or becoming so later.

2. Capillary, bronchial or parenchymatous haemorrhages are not unfrequently followed by phthisis, where no direct connection exists between the haemorrhage and the pneumonic processes, which, as a rule, are the origin of phthisis. Patients who are predisposed to such haemorrhages, are also predisposed to these inflammatory processes.

3. Capillary, bronchial and parenchymatous haemorrhages are not unfrequently, in patients in whose lungs neither tubercles nor the remains of an old pneumonia are present, the origin of phthisis, and in this way, that the blood poured into the alveoli of the lungs and remaining there, with the products of the inflammation set up by this effused blood, undergoes caseous degeneration.

4. In the same way, bronchial and parenchymatous haemorrhages often hasten the course of an already existing case of phthisis.

5. In some exceptional cases the haemoptysis is not the origin but the result of pneumonic changes, which, in their further development, lead to phthisis. Such cases are easily recognized, as violent fever or other inflammatory symptoms usually accompany or precede such attacks of haemoptysis.

6. The blood remaining effused in the alveoli of the lungs and the products of an old pneumonia, which have undergone caseous degeneration, are often the exciting cause of the development of miliary tubercle.—*Boston Medical and Surgical Journal.*

QUARTERLY RECORD OF OPHTHALMIC AND AURAL SURGERY.

COLLATED BY W. S. MITCHELL, M. D., PROF. OF OPHTHALMIC AND AURAL MEDICINE, NEW ORLEANS SCHOOL OF MEDICINE.

A Case of Night Blindness, from Worms in the Intestinal Canal, Successfully Treated: By EDWIN C. LEEDOM, M. D., of Plymouth, Montgomery Co., Pa.

SEVERAL weeks ago a laboring man from Whitemarsh Township, called at my office with his son, a boy of seven years of age, for whom he wished me to prescribe. He stated that the boy was going to school, that he had no difficulty in learning his lessons, and that he got along very well through the day, but that as soon as night came his eyesight failed, so that he could not discern objects; that he would run against tables, chairs, and other things, and that it was dangerous for him to move about, and that he was afraid that the boy would become totally blind.

There was no indication of disease about the boy. Instead, he

looked sturdy and robust. His eyes presented no peculiarity. Upon taking him to the window, the pupils probably did not contract quite so much as they do in persons whose eyes are unaffected. But I could not be certain that there was much difference.

Upon making particular inquiry, I ascertained that he exhibited, at times, some of the symptoms of worms. Therefore, I concluded to commence the treatment by giving some anthelmintic, and I prescribed as follows: R. Pulv. spigel. mariland. 5j; Divide in chart. vi. One of these powders to be given to the boy three times a day for two days in succession, and to be followed on the morning of the third day by six grains of calomel.

I requested the father to call again in about a week, but I saw nothing of him or his son until a short time since, when the man called on me, and stated that the boy, after he had taken the medicine, discharged a great number of worms, some of which were of very large size, and that his eye-sight had returned; and that he had tested it in various ways, and that it was as perfect as ever.—*American Journal of the Medical Sciences.*

Heptic Form of Strumous Ophthalmia (Exanthematous Ophthalmia).

MR. R. S. OGLESBY published (*Practitioner*, May, 1869) some interesting though not very novel remarks on this affection.

He observes: "Before proceeding to active treatment, instructions regarding diet, regulation of the bowels, etc., should be given. The diet should be plentiful, simple and nutritious; and all articles of food likely to unduly tax the digestive powers (which are as a rule weak in such children) should be carefully avoided. Strict attention should be paid to the bowels, which ought to be opened at least once during each day, but oftener if the appetite be faulty, the tongue loaded, and the fæces light-colored and of bad odor. These preliminary instructions having been attended to, special treatment may be adopted.

"It is well to begin with small doses of arsenic in form of Fowler's solution. Two drops may be given thrice daily, in some bitter infusion, to a child between one and two years of age, and gradually increased to four drops. Seldom is it requisite to further increase the dose. Arsenic appears to exercise a marked control over the febrile symptoms of this disease. As the hepatic eruption diminishes, the child ceases to shun the light, and as the rash fades the pustule on the eye heals. The benefit of fresh air in the more obstinate forms of the disease is well known; but it is often difficult to convince parents that exercise in the fresh air will benefit the child. They imagine that it is rather hurtful than otherwise, because the intolerance of light is then a distressing symptom, proper means not having been taken to

shade the eyes. A ready method is to place over each eye a pad of cotton wool, and over the pad a bandage, which should encircle the head, and be tied on the occiput. The pads should be frequently renewed and the eyelids washed with warm water."

—*American Journal of the Medical Science.*

Division of the Supraorbital Nerve: By J. Z. LAURENCE, F. R. C. S., M. B.

M. A. V., aged 48, was admitted into St. Bartholomew's Hospital, Chatham, October 24th, 1868. Some time previously she had received a blow immediately below the left eyebrow, and ever since had felt a continual pain in the ball, and in the circumorbital and nasal regions of that side. I found the lens dislocated downwards, the iris tremulous, a certain degree of scleritis and cystitis, one sign of which were two lines of marked tenderness situated at the inner and outer margins of the cornea, from which they were distant about a line. The tension of the globe was normal; the injured right eye was also very slightly inflamed, somewhat intolerant of light, and ached and watered when she attempted to use it for reading. She also suffered slight pain in the right circumorbital region. With the injured eye she read CC at one foot; with the right eye X, at ten feet; $5\frac{1}{2}$, at ten inches; and, with 20-inch convex glasses, $1\frac{1}{2}$ at eleven inches. At shorter distances her reading power was much diminished. On October 26th, I divided the ciliary nerves in the two lines of tenderness of the left eye. By the 29th, the lines of incision had healed, the circumorbital pains around both eyes had diminished, and the asthenopic symptoms of the right eye were considerably lessened. By December 7th, considerable pain had recurred in the left eyeball and in the adjacent orbital regions. On pressing the inner and upper part of the ridge of the orbit she shrank back, and palpation with a probe revealed the most exquisite tenderness of the inner and upper part of the globe. In these regions I again divided the ciliary nerves; but, by the 25th of January, 1869, the pain in the eyeball, and in the orbital and nasal regions, had recurred with greater intensity than ever. As a last step, to endeavor, if possible, to relieve her without having recourse to removal of the eyeball, I divided the supraorbital nerve at the point where it lay in the supraorbital notch. From this time onwards she steadily improved. On February 4th, the circumorbital and nasal pains had all but disappeared; but, when the inner angle of the operation wound which, at that point, was still unhealed, was touched, she experienced a pain proceeding upwards in the direction of the sagittal suture to the vertex. The left frontal and parietal regions were quite numbed. All vascularity had disappeared from the eye; which,

however, retained mere perception of light. I last saw her on March 1st; previously to that there still remained a slight pain on the vertex, which, however, had disappeared under the application of a blister, and the internal administration of the iodide of potassium.—*British Medical Journal*.

Peculiarities of the Retina of the Hedgehog.

MR. J. W. HULKE remarks that the distribution of the retinal blood-vessels in this insectivora is most remarkable, *from the fact that only capillaries enter the retina.*

In all other mammals except the hedgehog, as far as known, the arteries, veins, and capillaries enter into the retina. In fish, amphibia, reptiles, and birds, the retina is absolutely non-vascular, the absence of proper retinal blood-vessels being compensated for in fish, amphibia, and some reptiles by the vascular net which in these animals channels the hyaloide, and by the highly vascular pecten present in other reptiles and in birds. Thus, it is possible to divide vertebrates into two classes, according as their retina is vascular or not.—*Medical Press and Circular*.

Converging Strabismus ; Post-Mortem Examination.

PROF. MANI had an opportunity of examining the head of a man of sixty who had suffered from this kind of squinting. The paralysis of the external recti was owing to compression of the sixth nerve, on both sides, within the cavernous sinus, by the carotid artery, which was abnormally twisted upon itself. The globes of the eyes were, however, quite healthy.—*Schmidt's Jahrb.*, No. 6, 1868.—*Lancet*.

Ophthalmoscope in Nervous Diseases.

M. BOUC. UT, as a candidate for the next prize in Medicine and Surgery at the Académie des Sciences, has presented an additional memoir founded on his prolonged researches with the ophthalmoscope in diseases of the nervous system. He comes to the following conclusions :

“ 1. Diseases of the spinal cord, as acute myelitis, spinal sclerosis, locomotor ataxy, etc., frequently induce a congestive lesion of the papilla of the optic nerve, which at a later period becomes atrophic. 2. The lesions of the optic nerve produced by diseases of the cord are the result of a reflex ascending congestive action, the great sympathetic nerve acting as the inter-medium. 3. The presence of hyperæmia of the optic nerve, of reddish suffusion (*diffusion*) of the papilla, and of a total or partial atrophy of this part, coinciding with weakness and numbness of the lower extremities, indicates the existence of an acute or chronic disease of the spinal cord.”—*Medical Times and Gazette*.

Impacted Foreign Bodies in the Nose: By W. M. BANKS, Esq., Liverpool.

There are two surgical accidents in which I am sure that Mr. Thudichum's instrument will not unfrequently be found of service. The first of these is the case of impacted foreign body in the nostril. Children, as every one knows, seem possessed of a mania for putting beads, marbles, beans, and similar objects into the nose. They seldom put them very far, or very firmly in, and there is no doubt that the actual impaction, or fixing of them, is often produced more by misdirected attempt to get them out than by anything else. I should certainly, before using any forcible efforts at removal by instruments, see what effect a rapid stream of water passed up the other nostril would have in dislodging the foreign body. In the number of the *Laneet* for December 17th, 1864, Dr. Skinner, of this town, showed that long before Dr. Thudichum's paper appeared he had been practically making use of the principle upon which it is constructed. Dr. Skinner discovered it by mere accident, the instrument he employed being one of Higginson's syringes. In the letter, he gave the following very interesting account of the removal of a bead from the nostril.

"In June, 1860, the child of one my patients was brought to me,—a little girl, two years of age, who had pushed an Indian bead up the right nostril. The mother had made vain attempts to pull it down, and succeeded in pushing it entirely out of sight, accompanied with profuse bleeding and terrific squalling. While the mother held the child's face over my basin, I forcibly injected some tepid water, by means of Higginson's syringe, up the left nostril, when the bead with one single compression of the elastic cylinder made its appearance in the basin."—*Liverpool Medical and Surgical Reporter*, Oct. 1868, p. 110.—*Braithwaite's Retrospect of Pract. Med. and Surgery*.

S. B. ROBBINS, M. D., of Lawrenceburg, Indiana, advises the use of collodion in entropium, and also remarks, that in ptosis he has used it with equally good effect, especially in cases occurring in aged persons, he has been led to believe (by experience) that it exerts some influence in restoring to healthy action the levator palpebrae muscle when rendered inactive by palsy of the third nerve.—*Western Journal of Medicine*.

ANATOMY, PHYSIOLOGY, AND THERAPEUTICS.

A New Anatomical Feature in Human Blood Corpuscles.

J. W. FREER, M. D., Prof. of Physiology and Microscopic Anatomy, Rush Med. College (*The Chicago Med. Jour.*), announced, May 15, 1868, that human blood corpuscles were not, as heretofore supposed, simply bi-concave disc; but on the contrary, there may be seen (by the use of Wale's illuminator) a nipple-like eminence in the centre of the concavity of each well-formed disc. This papillary eminence is about $\frac{1}{10000}$ of an inch in diameter at its base; consequently, he arrays himself against the expressed opinion of physiologists and microscopic anatomists as set forth in standard works, *to wit*, that the human blood is non-nucleated. Continued investigation on this subject since the first article was published, has confirmed the announcement then made, and now he illustrates his discovery by two diagrams—one representing corpuscles of human blood, the other corpuscles of a frog—both of which illustrate these eminences. All of the researches upon which his present convictions are based has been prosecuted by the use of reflected light instead of transmitted light, by which all examinations of blood corpuscles have been made heretofore. Corpuscles found in defibrinated blood are the best for observation.—*Medical Record.*

Human Blood Corpuscles.

DIAGRAM I.—*a*, represents the perfect, human blood corpuscle. It will be seen that the centre presents a slight elevation, surrounded by an annular depression, while the circumference of the disc is, comparatively, thick, smooth and rounded.

b, represents a disc with serrated and shriveled margin, with a perfect central elevation remaining.

d, a corpuscle without the central elevation.

c, is a hypothetical diagram of a disc placed upon its edge.



DIAGRAM II.—*a*, represents the perfectly formed, oval and characteristic disc, or globule, of the frog. In the central portion may be seen an oval depression, in the centre of which can be observed the elevation representing the nucleus. The margin is shown to be rounded, smooth and thickened.

b, is like the former in every respect, except the central papilla is absent.

c, a shriveled corpuscle.

d, a corpuscle as it would appear set upon its edge.—*Pacific Medical and Surgical Journal.*

Effects of Temperature on the Muscular System.

M. CHONONLEVITCH, of St. Petersburg, has recently published the results of a very important investigation on certain physical and physiological properties of muscle. He briefly summarises his conclusions as follows :

1. When heat acts on a muscle at rest, it produces two effects, the one physical and the other physiological. The physical effect is observed only between the temperatures of two and twenty-eight degrees centigrade. Between these limits the muscle acts under the influence of health, directly contrary to the effect of all natural bodies, it contracts by heat and expands by cold.

2. Above twenty-eight degrees centigrade, this purely physical influence is complicated with another action of a physiological nature. If the temperature be raised uniformly up to forty or forty-one degrees, a contraction is produced, of which the extent increases between thirty five and forty-one degrees. The muscle is in a state which the author designates as "caloric rigidity."

3. If it be attempted to produce caloric rigidity in two muscles, one of which has been separated from the body two or three hours before the other, it will be found necessary to employ a higher temperature for the former muscle.

4. The volume of the muscle diminishes during rigor mortis.
 5. The specific gravity augments under the same influence.
 6. The absolute weight diminishes at the same time.
 7. The volume of the muscle also diminishes during caloric rigidity.
 8. The mechanical tension of muscles causes also a diminution in their volume. This, according to the mechanical theory of heat, is in accordance with the succeeding fact.
 9. In muscles, (principally living muscles), a certain quantity of heat becomes free, under the influence of mechanical extension.—*Medical Press and Circular.*
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Osseous Regeneration of Sternum.

DR. Enrico Bottini communicated to the *Annali Universal di Medicina* the particulars of the case of a soldier, aged 30, wounded in the superior region of the sternum during the Italian campaign of 1866. The ball lodged, producing caries, necessitating an operation for its removal which exposed the pleural sac, the osseous walls of the sternum having been gradually absorbed. Prompt recovery ensued and new osseous tissue was formed, analogous, in resistance to the touch, to the rest of the sternum.
Medical Record.

A false Tail.

THERE was lately brought to M. Gosselin, at the Hospital de la Charite, an infant five weeks old, bearing, at the end of the trunk, and appendix five centimetres long, a little thicker than a goose-quill, and slightly tapering at the free end. On examination, M. Gosselin found it to be soft, and apparently not a prolongation of the vertebral column. He therefore, in compliance with the desire of the parents, removed it by two semi-elliptical incisions at the base. A rather large artery required ligature; the edges of the wound were brought together with metallic sutures; and healing, M. Gosselin has been informed, took place rapidly. On examination, the appendix was found to consist externally of a thin cutaneous sheath with hair, and, internally, an abundant fibro-cellular tissue, containing fat only at its junction with the sub-cutaneous connective tissue. The case was like one of *molluscum pendulum*, having the peculiarities of being congenital, of being more elongated than usual, and of being in a situation where it might readily be mistaken for a tail.—*British Med. Jour.*

The Use of Carbolic Acid in Colombia. Letter from Dr. FELIX G. RUBIO.

[*To the Editor of the Medical Times and Gazette*.]—SIR, I take the liberty to inform you that I have used carbolic acid since it first came to my notice, about six or seven years ago. Allow me to tell you that this country is warm, damp, and has all the propensities peculiar to evolve suppuration and gangrene, and to engender vermin of every description, and to provoke tetanus; and I have alway found carbolic acid to be one of the best anti-putrid and disinfectant, as well as the most useful, medicines in the treatment of wounds and foul and old ulcers of every description. It has given me the most flattering and satisfactory and speedy effects. The following is one of the many cases in which I have used carbolic acid :—

Dionisia, a poor, miserable, wretched black woman, 35 or 36 years of age, with filthy and scandalous habits, had suffered for many years from syphilitic ulcers, which had destroyed the palate part of the upper lip, and the cartilage and septum nasi of the nose. She was shot lately in her right leg. An ounce lead ball entered clean through the upper and external third of the leg, some five or six inches below the knee-joint, passing between the lower part of the head of the tibia and the internal side of the superior extremity of the fibula, without lacerating either of the two bones. I saw her soon after the accident, and, finding that there was but a slight haemorrhage and very little chance to provoke adhesion by the first intention, I passed through the wound a tape dipped in simple cerate in the form of a common seton, with the object of provoking a suppurative healing action. I lost sight of this woman until two months afterwards. I was called to her, and found the leg perfectly gangrenous. I was told that this woman had been in a fair way for the first six or eight days after the accident; that one day a venomous fly—there are many of these in this country—sat on the wound, and discharged there a great number of maggots, which in due time all changed into as many vermin, which soon invaded all the soft parts of the leg, and caused complete sphacelus of the whole limb. The foot and the leg up to the knee were now black, soft, and completely replete of vermin, which formed wave-like movements under the putrid skin, and made the most disgusting sight to look at. The smell was horrible. On the upper part of the knee, just at the attachment of the apex of the patella and the inferior extremity of the os femoris, there was a regular line of demarcation, showing plainly the boundaries of the gangrene. There cannot be anything more repugnant and horrible than the sight of this woman's leg; and, notwithstanding the putrefactive and loathsome state of her limb, the nastiness in which she was inundated, both as to her body and clothing, and the great misery in which she was involved, she was fat, stout, and fleshy, as if she had been fed on her own filth. She was very hungry.

I immediately ordered her to wrap up her knee with cloths dipped in a solution of carbolic acid (one part) and cold water (thirty parts), which in a very few hours disinfected the noxious knee, and three days after I separated the putrid limb. I washed well the raw surface with the same carbolic acid solution, and placed the lower flap in apposition with the upper one, and kept them *in situ* by wire stitches. I ordered the carbolic acid solution to be applied constantly to the ulcer, and two weeks afterwards the stump was well. I am, etc., FELIX G. RUBIO, M. D.

Barbacoas, United States of Colombia, South America, May 10.—*Medical Times and Gazette.*

“Sweet Quinine.”

THE preparation largely advertised under this name has been analyzed by the editor of the American Journal of Pharmacy, who states that it is not quinine at all, “but mainly the alkaloid *cinchonia* precipitated from the sulphate, dried and triturated with an impure glycyrrhizin prepared from liquorice root,” in the proportion of about three parts of *cinchonia* to one of impure glycyrrhizin. The Journal adds: “Cinchonia, however tasteless, is not quinine, nor does its commercial value approach that of quinine so nearly as it is made to do in the garb of ‘sweet quinine.’ When physicians want *cinchonia* they can get it by prescription, and it is not in accordance with our ideas of fair dealing to serve it up as a new substance.”—*New York Med. Gazette.*

Bromide of Potash in Dentition.

DR. Salvatore Caro, in an interesting paper read before the New York County Medical Society, on the use of this remedy in “summer complaints,” remarks, in connexion with the disturbances arising from dentition: “In the most severe cases of odontitis, either with or without ulcerated gums or loose bowels, I have never failed to relieve the child by the local application of the bromide of potassium. Almost immediately after the first rubbing, the gums, from being turgid, swollen and red, assume their natural color, and a certain amount of ease is felt. Saliva commences to dribble; and, as if by enchantment, agitation, carpopedal involuntary motion, vomiting and looseness of the bowels disappear. As the vomiting and diarrhœa in this case are not the consequence of gastro-enteritis, but an excitement of the stomach and the intestinal mucous membrane, owing to the inflamed condition of the gums, I suppose it will never be cured either by the scarification of the gums or by the use of astringents or anodynes, but, as I shall hereafter prove, simply by the use of the bromide of Potassium.”—*N. Y. Medical Gazette.*

Poultices.

THE *Journal des Connaissance Médicales* publishes an article by Dr. Hébert on a subject which may not be uninteresting to families—viz., cataplasms, those especially which have mustard for their base. The seeds of the black kind, which in a pulverized state, are used for poultices, owe their properties to a liquid, acrid, and volatile substance, being nothing but essence of mustard. This however, does not exist ready formed in the seed; it is generated by a kind of fermentation, caused by the action of an albumenoid body, called myrosine, which plays the part of leaven, on a peculiarly fermentable compound, mysonate of potash. This transformation, which has been called *sinapisic*, can only take place by the intervention of water at a temperature higher than freezing-point, and lower than 75 deg. Centigr., those being the usual conditions requisite for producing fermentation. This is a circumstance which is not commonly taken into account in practice. The generation of the essence of mustard diminishes under a temperature ranging between 50 and 75 deg. Cent., and entirely ceases at the latter. Hence, boiling water, or even such that cannot be borne by the hand, will spoil both the poultice and the sinapsed footbath. Again, alcohol, acids, metallic salts, and any other agents, having the power of stopping fermentation, or retarding it, are detrimental. Besides the two principles already mentioned, through whose joint action the essential oil of mustard is produced, the seeds of this plant contain various others, among which there is a fixed and inactive oil, having some of the properties of that of rape-seed, and which may easily be extracted from mustard powder, either by strong pressure, or better still, by acting upon it by lixiviation in a sulphuret of carbon. When this oil is extracted, what remains is much more powerful, and will, moreover, keep indefinitely. Many years ago, M. Robinet attempted to bring this mustard-flower, deprived of its fixed oil, into general use; but prejudice and routine proved too strong for him; and it was not until this powder was gummed to paper, then cut into squares, and sold in elegant tin boxes, that it came into fashion. But what every family should keep in mind is this, that mustard poultices ought not to be made with hot, but with lukewarm water.—*Medical Press and Circular.*

Simple process for detecting Strychnia.

M. SCHACHTTRUPP, (*Zeits. Analyt. Chem.*, p. 284, 1868, and *Jour. de Pharm.*) This process consists in saturating the suspected substance with ammonia, and allow it to dry spontaneously; then heat it with a little amylic alcohol, after which add a few drops of this liquid to sulphuric acid and bichromate of potassa, when, if strychnia was present in the substance, the well-known coloration characteristic of that alkaloid will be obtained.—*Am. Journal of Pharmacy.*

Atropia as an Antidote to Prussic Acid.

IN the *Practitioner* for August, 1868, is an article by M. W. Preyer, on the toxicological action of prussic acid. His experiments led him to the conclusion that in comparatively *moderate*, though fatally poisonous doses, prussic acid acts by suddenly and completely depriving the blood of its oxygen. Obviously, then, the first object is to resaturate the blood with oxygen as quickly as possible. In *very large* doses, prussic acid paralyzes the heart, and is absolutely fatal. These observations led M. Preyer to believe that the true physiological antidote for prussic acid was an agent which (without producing any other important poisonous effects) would paralyze the peripheral branches of the vagus in the lungs and in the heart; and, on the other hand, stimulate the central nervous apparatus of respirations in such a manner as to produce rapid respirations. He now makes the very important announcement, that sulphate of atropia acts precisely in this way, and he has demonstrated on rabbits and guinea-pigs, that the subcutaneous injection of a *very small* dose of this agent, if performed quickly after the injection of the prussic acid, is an *unfailing antidote*.—*Half-Yearly Compendium of Medical Science.*
—*Canada Medical Journal.*

Employment of Phosphide of Zinc in Medicine.

M. VIGIER and Dr. Curie have recommended the use of phosphide of zinc in cases where the administration of phosphorus is indicated. This substance is a grey crystallized body, perfectly definite in composition, unaltered by moist air, and keeping well, either in powder or in pills; but nevertheless easily decomposed in the stomach, and capable of exercising an action on the system identical with that produced by phosphorized oil. Phosphide of zinc is selected in preference to the other metallic phosphides, because it is at once perfectly stable, and easily decomposed by weak acids. Even lactic acid attacks it, evolving phosphoretted hydrogen; according to Messrs. Vigier and Curie this explains the action which occurs in the stomach. Phosphide of zinc is prepared by passing the vapor of phosphorus over zinc heated to ebullition, in a current of dry hydrogen.

The authors administer it in doses of one milligramme (0.015 grain) several times a day. It is given either in the form of pilules or of powder.—*Medical Press and Circular.*

Iodide of Sodium in Lead Poisoning.

THE iodide of sodium is advised by M. Rabuteau in treating lead poisoning, instead of iodide of potassium. The former is as active an eliminant as the latter, and no ill effects are produced.
—*Medical Press and Circular.*

Alcohol in Large Doses in Poisoning by Mushrooms.

M. POULET, in a communication to the Académie des Sciences, affirms that alcohol in large doses is a veritable antidote to the poisonous mushrooms of the genus *amanite*; and he believes it equally valuable in the poisoning by other species of mushroom. The author adds that ebullition in water impregnated with salt or vinegar, is insufficient to render the poisonous varieties inoffensive, and that the *agaric bulbeux* in particular always retains a great portion of its toxic principal.—*Gaz. Hebdo.*,—*Medical Press and Circular.*

Sulphite of Soda in Chronic Cystitis.

MR. L. WILCOX, late house surgeon of King's College Hospital, recommends the use of sulphites in those cases of chronic cystitis where the urine decomposes before it is eliminated. He finds that by the employment of sulphite of soda all the putridity disappears, and the urine becomes clear and colorless.—*Canada Medical Journal.*

The Internal use of Carbolic Acid in Skin Disease.

AT the Vienna Medical Society, Dr. Kohn gave an account of the internal employment of carbolic acid by Professor Hebra. The most remarkable effects were produced, hyperæmia disappearing, and the irritation being relieved. Trials have as yet only been made in psoriasis, prurigo, pityriasis, and pruritus cutaneous. It is best administered in the form of pills, increased from six grains to twenty grains per diem. The solution is repulsive to most patients.—*Wiener Med. Woch.*—*Canada Medical Journal.*

Poisoning by Camphor.

A CASE reported in the *Journal de Chimie* has lately been laid before the Society of Medicine and Pharmacy of Grenoble, of a remarkably small quantity of camphor, used as an enema, causing most urgent symptoms. "A child of three and a half years, suffering from mild fever, had an enema of five grammes of camphor, suspended in yolk of egg, administered to it. This was shortly followed by lividity of the face, vomiting, cold sweat and convulsions, accompanied directly afterwards by insensibility and retention of urine. The child's life was in imminent danger for ten hours. Coffee was given as an antidote, and recovery gradually took place."—*Medical Times and Gazette.*

Therapeutic uses of Oxygen. By M. CONSTANTIN PAUL.

M. Constantin Paul sums up a paper on this subject as follows : 1. Oxygen is not a poisonous gas ; and thirty *litres* of this gas in the pure state can be inhaled for several days without any accident. It is only at the end of two or three weeks that fever is produced. 2. Oxygen is a valuable resource in cases of asphyxia, especially when this is due to accidental suffocation. It may be useful in cases of strangulation, hanging and drowning, as well as in poisoning by noxious gases or vapors. 3. Oxygen is a valuable remedy in nervous asthma. In humid asthma—*i. e.*, the catarrh which complicates emphysema—it will also be of good service, provided its use be persisted in. 4. In phthisis, oxygen has not given such good results as were expected. It produces immediate relief, and this is very valuable ; but fresh exacerbations follow, more intense, perhaps, than the first. It can, then, be regarded only as a palliative. 5. In albuminuria, oxygen may become a valuable remedy, if it be found, by further observation, to cause the albumen to disappear from the urine, as was observed in a case by Eckart and in one under the author's care. In any case, the remedy should be tried. 6. The same remark is applicable to diabetes. 7. In local gangrene, if there be not obliteration of the arteries, oxygen is a sovereign remedy.—*British Med. Journal*, Nov. 14, 1868 ; *from Bulletin Gén. de Thérapeutique*, Aug. 15.

IN one of last year's numbers of the *Archives de Physiologie*, we have been shown an article by Dr. Brown-Séquard on the subject of the *immediate arrest of convulsions of the lower limbs, by the irritation of certain sensitive nerves*. The Doctor had observed seven cases in which convulsions had been stopped by the means here indicated. The process consisted in simply flexing suddenly and with a good deal of force the great toe upon the foot. The first of his cases was a violent one. The cessation was prompt upon the application of the remedy, and lasted long enough for the patient to be dressed. This patient was seen in consultation by Nélaton and Troussseau, who witnessed the phenomenon. In some of the other cases the arrest of spasm was not so immediate or so complete ; but in all seven there was at least considerable diminution of convulsive action, and that diminution was sufficiently prompt. Dr. Brown-Séquard makes some physiological reflections on these facts.—*Boston Medical and Surgical Journal*.

A CHILD died recently in St. Louis, Mo., from an over dose of hive syrup. An ounce was given from which the child died in four hours. Chocolate drops are recommended to be taken after quinine in solution. They completely remove the bitter taste.—*Canada Medical Journal*.

Sedative Belladonna Plaster.

DR. BOULU has devised the following plaster, which has met with great success in the treatment of rheumatic and neuralgic pains :

Emp. Plumbi.....	16 oz.
Extract Pini Sylvestris,	
Extract of Belladonna,—aa.....	1½ oz.

Spread evenly, over fine strong linen, so that every square inch should contain two grains of the active ingredient incorporated in the plaster.—*Druggists' Circular and Chemical Gazette.*

The effects of Alcohol on the System.

DR. LETHEBY (Chem. News) states that the effects of alcohol are much modified by the substances with which it is associated in different alcoholic liquids—beers and ale, for example, act on the respiratory function by reason of the saccharine and nitrogenous matters they contain ; wine, also, as well as cider and perry, have a similar action ; and in proportion to their saccharine and acid constituents, brandy and gin lessen the respiratory changes, and the latter acts on the kidneys by reason of the volatile oil it contains ; whisky is uncertain in its effect upon the lungs ; while rum, like beer and ale, is a true restorative, as it sustains and increases the vital powers ; and he says that the old-fashioned combination of rum and milk is the most powerful restorative with which he is acquainted.—*New York Medical Record.*

Inoculation of Tuberclie upon Vegetables.

M. DESMARTIS, of Bordeaux, has succeeded in inoculating upon plants tubercular matter taken from the human being.—*Medical Record.*

Rich Beef Tea.

THE addition of a small tablespoonful of cream to a teacupful of beef tea renders it richer and more nourishing.—*Ibid.*

Fluorine in the Brain.

PROF. HORSFORD (Yale College) states that fluorine is an undoubted constituent of the brain. The reagents, &c., used in determining this point were carefully examined for that element before the experiments. He was induced to investigate this subject from the circumstance that fluorine is so frequently associated with phosphorus.—*Medical Press and Circular.*

MEDICAL NEWS AND MISCELLANEOUS.

DR. ALEXANDER H. STEVENS, late President of the New York Academy of Medicine, died on the 30th of March last, at the advanced age of eighty years.—*Buffalo Medical and Surgical Journal*.

The Discovery of a Minute Fossil Horse.

PROFESSOR MARSH, of Yale College, has discovered in the tertiary deposits of Nebraska, the minutest fossil horse yet obtained. It is only two feet high, although full grown. This makes the seventeenth species of fossil horse discovered on this continent.—*Boston Medical and Surgical Journal*.—*Chicago Medical Examiner*.

Pneumonia not produced by Cold.

According to the United States mortality census, District No. 1, composed of New England and New York, has a mean winter temperature of 22.96°, with one death from pneumonia in every 12,873 inhabitants; while in District No. 8, composed of the four Southwestern States, the mean winter temperature was 53.10°, and the deaths from pneumonia equal one in every 3,250 of the inhabitants.—*New York Medical Record*.

THE venerable Charles D. Meigs, M. D., one of the most distinguished medical men of the day, died suddenly yesterday at his residence in Delaware County.—*Philadelphia Telegraph*, June 23.

The Culpability of Physicians in Deaths from over dose of Remedies.

JUDGE Fisher, of Washington, in a recent trial for man-slaughter, charged the jury that a mere error of judgment should not be punished, for all are liable to error. If the defendant had given medicine for the purpose of relieving the patient, and by mistake prescribed an excessive dose, he is not guilty of man-slaughter. If there was wilful rashness, if he cared not whether the medicine killed or cured, it would be different from a case where medicine is administered with honest intentions. It has been testified that this was one of the prescriptions which it was designed should not be administered after relief was had, and that deceased was relieved by the first dose. The physician was not responsible for the administration of the second dose, and they should acquit him. The jury after a short absence returned with a verdict of not guilty.—*New York Medical Record*.

JOSEPH M. TONER, M. D., of Washington, D. C., is hard at work in collecting materials for a Biographical Dictionary of Deceased American Physicians. It is his intention to have it contain a reliable sketch of every deceased medical man of regular medicine, from the earliest settlement of our country to the present time. Relatives and acquaintances of deceased physicians are requested to forward any information which they may possess to No. 350 Pennsylvania Avenue, Washington, D. C.—*Medical Record.*

Dead.

WE are pained to learn that Dr. Thomas R. Micks, an esteemed resident of this city, died last Saturday on the steamer Bart Able, while on his way to Shreveport. The Doctor was a gentleman of fine talents, of high character, and of a frank and genial disposition. He graduated with high honors at the University of Pennsylvania, but had previously attended a course of lectures at the New Orleans School of Medicine. During the late war he did good service on the side of the Confederacy, being among the first to respond from this city to the call of General Bragg for surgeons at Pensacola, leaving here on the 1st of April, 1861. He participated in the night attack on Santa Rosa Island, and was in the Kentucky campaign, where he was taken prisoner. After being exchanged, the Doctor was rewarded by being placed in charge of the General Hospital at Wilmington, N. C., where he remained, with the confidence of his chief, the Surgeon General, until the close of the war. There are thousands of his suffering compatriots who will bear living witness to his great personal kindness, his high-toned and chivalric characteristics. His father, Dr. Wm. G. Micks, formerly a prominent and highly esteemed surgeon in the U. S. Navy, survives him and is now residing in Clinton, N. C. Dr. Micks leaves a wife and two children to mourn his loss.

EDITORIAL AND MISCELLANEOUS.

IN closing our journalistic labors for the year, we can not allow the occasion to pass, without returning to our patrons our sincere thanks for their kind appreciation of our efforts.

To our subscribers we would say, that as an evidence of a desire on our part, to literally fulfil our early promises to them,

we have, instead of an eight hundred page Journal, presented them with one of nearly nine hundred pages ; and we hope that the efforts of the past year will be received as a guarantee of a Journal in the future still more worthy of their support.

The Journal has succeeded beyond our most sanguine expectation, and is now established on a secure basis. Its future improvement is now for the most part, in the hands of our subscribers ; for we have already promised, and now renew that promise, that it shall be increased both in length and interest with the subscription list ; it is therefore to the interest of every subscriber to extend its circulation as much as it lies in his power.

Its price, \$5 00 per annum, is now such as to place it in the power of every medical practitioner to subscribe.

In order to place it thus at a low price, in the reach of every one, we have been compelled to do away entirely with the old credit system, and hereafter the Journal will be conducted on a purely cash basis ; and to no one will it be sent unless the order is attended with the subscription price.

To our contributors we return our sincere thanks, and hope they may be induced to continue their favors. We can not, however, refrain from expressing our regret that the names of so many of our profession in the South are yet strangers to our pages as contributors.

No medical man more than half fulfils his duty to himself and the profession, who allows his life to pass in the mere routine of daily visits, without contributing something to medical literature. Cannot our Southern brethren overcome now and then their inertia and dread of writing, and furnish a moiety of their experience to the general fund.

To our exchanges our heart-felt thanks and sincere well-wishes are due for the many favors extended to us from the incipiency of our enterprise to the present.

Rank of Medical Officers in the Navy.

THE subject of rank in the medical staff of the navy has lately received much attention from medical journalists, both in this country and in Great Britain. In both services the same jealousy exists on the part of the line officers towards the medical body, the point of issue being the relative rank and accompanying privileges of the latter. So far as we have observed, redress of grievances is sought by appeals to the sense of justice of legislators directly, and indirectly by agitating the subject before the public.

Now, while we fully agree that our naval medical brethren are suffering a real grievance, we do not agree with them, nor with their journalistic champions, about the best means of redress.

We think it useless to seek relief from the National Legislature, for the oppressors are more numerous and have vastly greater influence with Congress than have the oppressed. It is the old, old story—the weak are always found in the wrong: "And on the side of the oppressors there was power."

We believe, however, that there is a remedy, and a very simple one. The medical public are by this time pretty generally informed of the treatment received by their naval brethren, and young graduates ought to know well enough what they have to expect. The most obvious way to avoid sharing these evils is to stay out of the navy, and we have often wondered that any medical man, possessing either ambition or spirit, in time of peace, should voluntarily subject himself to the indignities and injustice which seem inseparable from the medical department of the service.

The case of those who are already in service is different, but we believe that their best remedy is in quitting it as soon as practicable. The high qualifications requisite for passing the stringent examinations would warrant better hopes of success in private practice than the average practitioner can indulge at the outset of his career; while the honors and emoluments of the profession in private life are out of all comparison with those of either branch of the public service.

As an evidence of the contempt in which the medical staff is held by the combatant officers, it has been proposed to ship doctors for the cruise, like seamen and cooks.

We candidly believe that a fair trial of this plan would be the surest and quickest way of convincing all concerned of the folly of treating with contempt and injustice the most intelligent, accomplished and laborious class of officers in the service; for then no one possessing any self-respect, or the most moderate qualifications for a backwoods practice, would consent to wear government livery.

Instead of pitiful complaints, appeals to medical bodies for countenance and support, and memorials to Congress, any or all of which will avail nothing at present, let each take his cause into his own hands, and withdraw from a conflict where defeat is certain. By prolonging the contest no advantage can accrue to themselves, and this course would only delay the result which must follow a determination of the respectable portion of American physicians to keep out of the naval service. The Government must have surgeons and if they demand the enjoyment of their just share of the honors and emoluments of the service, as a condition of entering or remaining in it, the condition must be granted.

ATTENTION is called to Messrs. Wheelock, Finlay & Co.'s advertisement of Calvert's crystallized medical carbolic acid and fluid disinfectant.

WE have just seen, with Dr. A. W. Smith, the case upon whom Dr. S., in the latter part of last year, performed reduction of the head of the femur after nine months displacement. The case was fully reported in the January 1869 issue of this Journal, page 71.

As the case is the only one (so far as we are aware) on record of successful reduction after the existence of so prolonged displacement, we presumed it would be interesting to our readers to know that the result has been perfectly satisfactory, and the cure in every way complete; the patient having been for some time past employed at his trade, that of ship carpenter.

IT is with regret that we have noticed the entry into the columns of some of our medical journals of an unpleasant controversy. That as writers we should differ, and so express ourselves, is natural; but we can hardly conceive of any justification for a departure from strict courtesy in the expression of these differences.

That professional gentlemen occupying the high positions attained by Prof. T. G. Bell, of Louisville, Prof. W. K. Bowling, of the Nashville Medical Journal, and Prof. E. S. Gailliard, of the Richmond and Louisville Medical Journal, should feel justified in diverting their talents from their proper and legitimate channels, to be wasted in the interchange of unprofitable personalities, is certainly, to say the least of it, much to be regretted.

We do not, for many reasons, consider it *our especial province*, either to criticise or to blame, but content ourselves, as friends of all parties, with hoping for an amicable and early settlement of this most unpleasant controversy.

Let us not, gentlemen, sacrifice our journals to individual pique; but rather let us ever keep in view our great object, as set forth in our pleasant reunion of May last, the advancement of our noble profession,—and with this view be careful to expunge everything of a personal nature from our columns.

ATTENTION is particularly called to the removal of the manufactory of Dr. Bly's artificial leg to No. 59 Camp St., Mr. Lewis Lockwood is in charge, and from the many opportunities which we have had of judging of his workmanship, we can cordially recommend him to all such as may be in need of artificial limbs.

ATTENTION is called to advertisement of cincho-quinine, by Messrs. J. R. Nichols & Co., Boston. It is for sale in New Orleans by Messrs. E. J. Hart & Co., 73 Tchoupitoulas St.

THE attention of the medical profession throughout the State of Louisiana is particularly called to the fact that a meeting will be held on the first Monday of December next, for the purpose of organizing a State Medical Society.

The Medical Association of New Orleans have kindly offered their rooms in the University buildings for the purpose, and appointed a committee to make all the necessary arrangements.

As the organization is an important and much needed one, it is to be hoped that the profession generally throughout the State will respond cheerfully to the invitation extended to them in our July issue, to form societies and at once elect delegates.

The list of elected delegates and all other communications relating to the organization should be addressed to Dr. Samuel Logan, Chairman of the Committee, Lock Box 890, New Orleans.

The importance of such an organization is so evident to every one that we deem remarks unnecessary, farther than to suggest that where local societies do not already exist no time be lost in their organization, so that every section of the State may be properly represented. The credentials of election as delegates should be forwarded as soon as an election is held, to the Chairman of the Committee as above.

It is presumed that due provisions will be made for the introduction of members by invitation, we therefore take the liberty of extending the invitation to every regular practitioner in the State who may wish to attend the organization. We will be glad, gentlemen, to welcome any and all of you, and renew in person many of the acquaintances commenced and so pleasantly continued by letter.

In Memoriam.

DIED, at his residence near Bloomfield, Ky., on the 18th inst., Dr. S. B. MERRIFIELD, in the eighty-first year of his age. He was buried with Masonic honors.

The subject of the foregoing obituary notice was the preceptor and brother-in-law of the senior editor of this Journal, who acquired the first and most valuable knowledge of his profession while under his tutorship; and while afterwards associated with him as co-partner in the practice of medicine, and who also bears the name upon which Dr. Merrifield reflected honor through his long and useful life. It is purposed in a future number of the Journal to publish Dr. M.'s method of practice in the treatment of fevers, which gained for him a wide-spread and deserved reputation.—ED.

Attention is called to Dr. D. Knapp's advertisement of instruction in ophthalmology and otology. His address is 25 W. 24th St., New York.

COMMUNICATIONS from the following parties have been unavoidably crowded out of the present issue. They will appear in our next:

Dr. O. Hendrick, on Splenic Fever; Dr. John H. Morton, on Carbolic Acid; Dr. J. S. Weatherly, on Haemorrhagic Malarial Fever; Dr. W. H. Weindahl; J. C. Mobley.

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A Text Book of Practical Medicine, with particular reference to Physiology and Pathological Anatomy. By Dr. Felix von Niemeyer, Prof. of Pathology and Therapeutics, University of Tubingen. Translated from the 7th German edition, by special permission from the author, by George H. Humphreys, M. D., and Chas. E. Hackley, M. D. Two vols. 1869. D. Appleton & Co., New York. Krull & Dickey, New Orleans.
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Dental Education. By J. H. McQuillen, M. D., D. D. S. Pp. 5. Annual Address before the Medical Society, State of New York. By John P. Gray, M. D.

The Myology of the Limbs of Pteropus. By Prof. Humphrey, M. D., Honorary Fellow of Downing College, Cambridge, Eng. From Author.

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Steiger's Literarischer Monatsbericht.

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Hot Springs, Bath Co., Va., with some account of their medicinal properties, etc.

Carbolic Acid, its Surgical and Therapeutical uses. A paper read before the Cincinnati Academy of Medicine, June 7th, 1869. By Wm. B. Davis, M. D.

An Essay on the Climate and Fevers of the South Western, Southern Atlantic and Gulf States. By Jos. C. Harris, M. D. Wetumpka, Ala.

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